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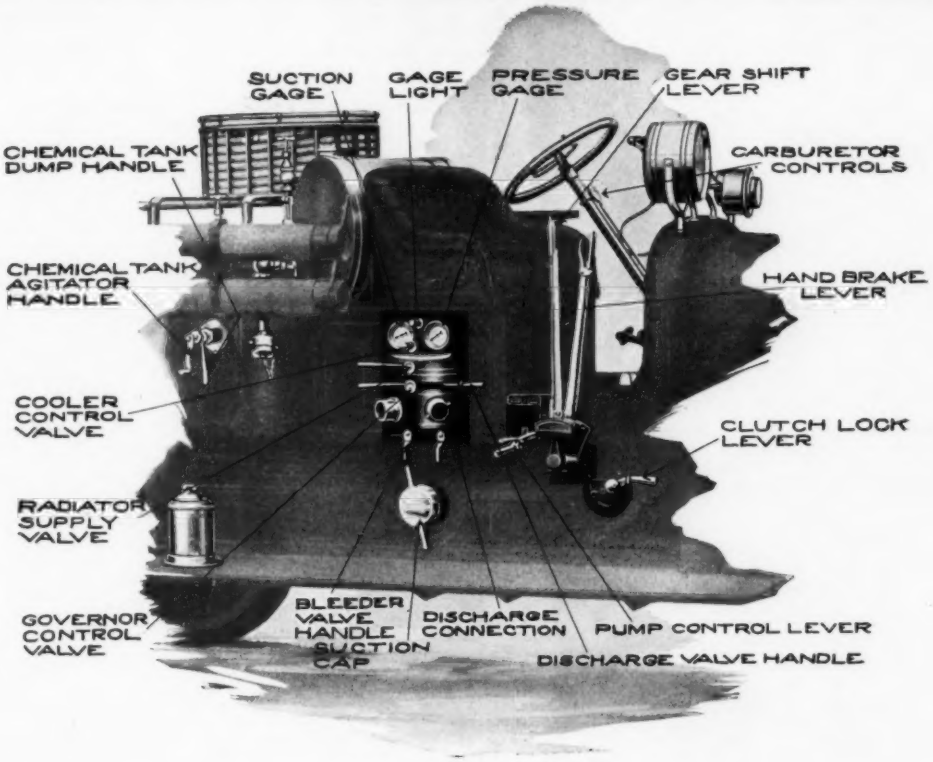

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MEMBER
Audit Bureau of Circulations
Assoc. Business Papers, Inc.

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A Consolidation of FIRE AND WATER ENGINEERING and THE FIRE ENGINEER

Published Every Other Wednesday

SUBSCRIPTION PRICE
U. S. $3 a year; Canada $3.50
Foreign $4; Single copies, 25c.

Issued at Lyon Block, Albany, N. Y.,
by CASE-SHEPPERD-MANN PUBLISHING CORP.
Also publishers of "Water Works Engineering," Technical Books, etc

Executive, Editorial, Advertising and Subscription Offices,
225 West 34th Street, New York City
All communications, including Editorial, Advertising and Subscription, can be directed to either of the above addresses.

KARL M. MANN, President and Advertising Director
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The Publishers

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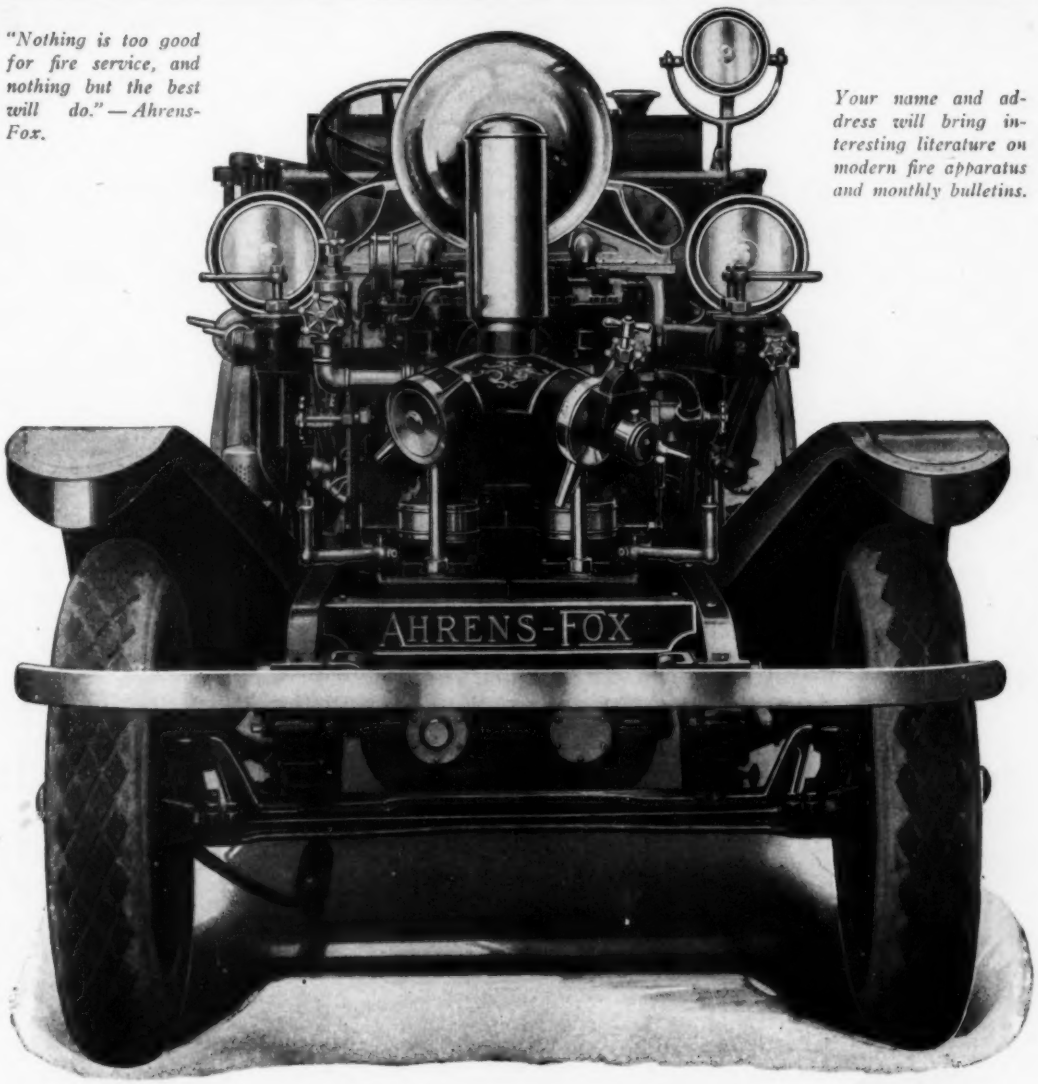

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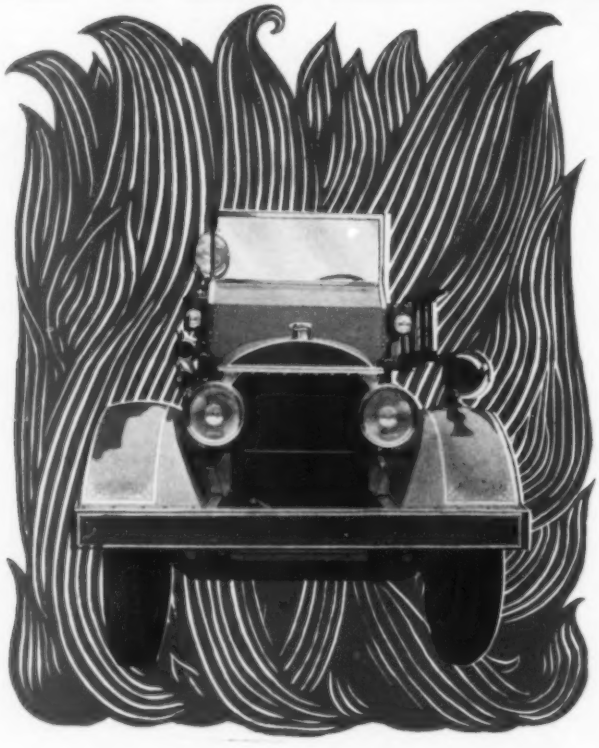

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The Journal of the Fire Protection Profession

VOLUME LXXX MAY 18, 1927 NUMBER 10

A Drill Tower with Unusual Features

San Francisco Has Up-to-the-Minute Unit—Sprinkler and Smoke Rooms Installed—Complete Alarm System for Instruction

By CHARLES W. GEIGER, San Francisco, Cal.

ONE of the most strongly built and best arranged drill towers has been erected for the fire department of the city of San Francisco, of which Chief Thomas R. Murphy, president of the International Association of Fire Chiefs, is the head. In this tower has been incorporated many new and novel features that make it thoroughly up-to-date in every respect.

The San Francisco Fire Department Drill Tower, 84 Feet High

The tower differs from other structures of its type in that it has a steel frame, with reinforced concrete floors and brick walls thirteen inches thick. It is seven floors in height, 35 feet square and 84 feet in height. One of the unusual features is a typical sidewalk that has been built just outside the tower, with sidewalk lights, sidewalk ventilators and sidewalk elevator doors. By means of this the firemen are taught the proper methods of entering a burning building from the sidewalk. There is a special steel ladder leading to the basement immediately below the sidewalk. In the basement there is a smoke room where firemen are taught the proper use of smoke helmets. In the smoke room, fires are built and firemen with smoke helmets are sent down with lights and a fire hose to discover the seat of the blaze and extinguish the same.

The Smoke Room and Sprinkler Room

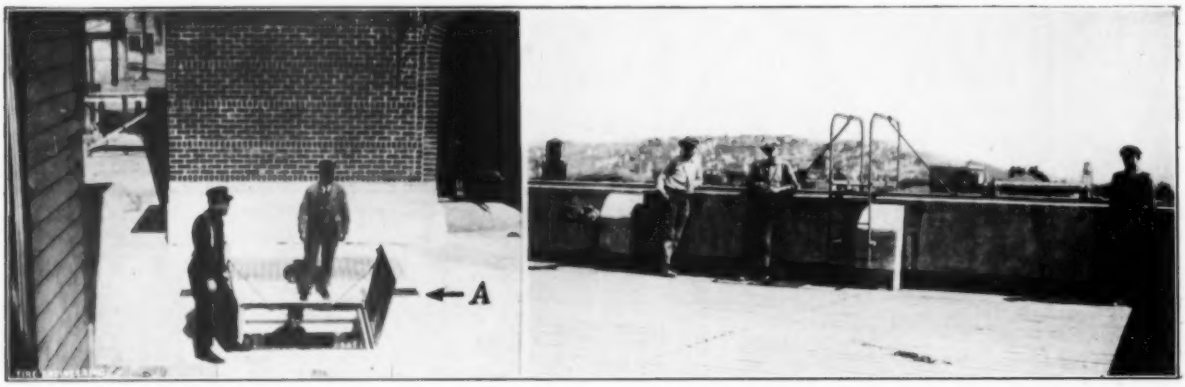
In the smoke room there are two ventilating windows, which open into a passage way, the top of which is provided with metal doors. By opening these windows and the doors and the door at the sidewalk a natural draught is created in the smoke room, which quickly clears that room of all smoke or gas. Thus the smoke or gas does not pass up through the drill tower.

There is also a sprinkler room in the basement which is provided with high power electric lights well protected and equipped with various sprinkler systems of the type that are known as the automatic sprinkler which go into action when the temperature in the room reaches a certain point. In this room a fire is built and when the temperature reaches the proper point the automatic sprinkler systems come into play and extinguish the fire, all these operations being clearly observed by firemen looking through a heavy wire glass window in one side of the room. By this means the comparative value of the various sprinkler systems can be judged.

In the ceiling of the sprinkler room (which is the floor for the first story) there is an eight inch cylinder with a cast iron flange set into the floor flush with the surface. This cylinder extends down into the sprinkler room (through the sprinkler room ceiling) below. A fire is started in the sprinkler room and the fire department circulator is inserted through the cylinder, the water turned on and the fire extinguished, this performance also being observed by the firemen looking through the wire glass window in the sprinkler room wall.

Fireman Wearing Smoke Helmet Emerging From Smoke Room of San Francisco Drill Tower

Under the concrete floor of the sprinkler room, there is a small sump which leads to a circular sump of 360



Left: Typical Sidewalk Lights, Ventilator and Elevator Doors, San Francisco Drill Tower. The Gas Meter Is Installed in Concrete Room Directly Under Sidewalk. Arrow at "A" Shows Sidewalk Ventilator. Right: Roof of the Drill Tower.

gallons capacity. Over this sump there is an electrically operated pump with a capacity of 360 gallons per minute, which automatically starts pumping when the water in the sump reaches a certain level and automatically stops when the water reaches a certain low level, which takes care of all water from the sprinkler room when the sprinkler systems are in operation.

There is a sliding pole extending from the second floor to the main or first floor by means of which the firemen are taught how to slide from the second floor.

Windows for Pompier Ladder Practice

On the east and west elevation every floor of the tower is provided with three windows for practicing with the pompier ladders. These windows are of the casement type, swinging in so as to give the firemen full use of the windows. At each of the windows on the east and west elevations there is an extra wood protecting sill bolted just outside the regular sill to protect the regular sill when the firemen are scaling the tower with the pompier ladders. When the extra sill becomes broken up it can be removed and another installed.

Steel Stairway and Outside Fire Escape

On the inside of the tower there is an open straight steel stairway leading from the basement to the roof. On the front elevation there is a typical modern steel fire escape extending from the roof to the top of the entrance to the tower on the first floor. There is a window leading to this fire escape from each floor. On the outside of the wall at the first floor there are four inlets connected to a stand pipe extending to the roof, with one inlet at each floor just to the right of each fire escape balcony, which can be connected with the city water supply. A 650-gallon tank on the seventh floor supplies water for the sprinkler systems in the sprinkler room.

High and Low Pressure Hydrants Installed

On the outside of the tower at the sidewalk there is a high pressure hydrant, where men are instructed in the placing of reducing valves and the handling of the regular valves just as is done at fires. The minimum pressure at this hydrant is 150 pounds and the maximum 350 pounds. There is also a hydrant connected to the low pressure water system with an ordinary pressure of 50 lbs.

Complete Fire Alarm System Installed

Within the tower there is a special room in which there has been installed a complete fire alarm system where all fire alarms are received. An intercommunicating telephone system has also been installed throughout the tower.

There are two life nets each 40 feet wide and 45 feet in length which are set up at the base of the tower when the men are scaling the walls of the tower with the pompier ladders.

Massachusetts Chiefs Hold Meeting

The April meeting of the Fire Chiefs Club of Massachusetts was held on April 20 at the Elks Club, with Chief Patrick J. Hurley, presiding. Fifty-two members were present.

C. F. Stratton, manager of the General Adjustment Bureau of Boston was the principal speaker and he spoke on "Losses by Fire and Their Adjustments."

The chiefs held an interesting discussion over the problem of over-insurance and arson. Announcement was made of the election to membership of Chief Ralph Johnson of Bourne, Mass., and of the death of Ex-Chief Bunker of Cambridge, Mass.

HARRY BELKNAP.

Boys Tamper with N. Y. Alarm Boxes

Many false alarms were reported since the installation of the new type of fire alarm box in New York city which operates by pulling a handle on the outside of the box.

One of the schemes of the boys is to run a light string from the lever on the box and stretch it across the sidewalk. When one goes by, the string is pulled unconsciously and the alarm is turned in. Another plan which was discovered was that strings were stretched from the box handle to the rear of a truck that was parked nearby. When the truck or car moved on, the handle was pulled and the alarm turned in.

Despite the annoyance of the increased number of false alarms, New York city believes that the new type of fire alarm box is more useful in promptly bringing the firemen to the scene.

Montana Firemen to Meet in Helena

The date of the annual convention of the Montana Firemen's Association has been definitely set at June 16-18, and the convention city as Helena. At first the date was changed when it was learned that the American Legion are to hold a convention there on the same day, but at the solicitation of the Legion officials, the date was retained. Entertainment planned for the legion will be enjoyed by the firemen as well. Hotels have agreed to reserve rooms for the firemen, and no confusion is expected.

Chief V. H. Steele of Billings is state president of the asociation; Charles Healey and Joseph Munger of Helena are the other officers of the organization.

Chief Sam Boyd Commended for Work—Fire broke out in the home of a U. S. army major in Knoxville, Tenn., The officer was so impressed with the cool work of the firemen that he wrote to Chief Boyd commending him on his well trained department and absence of confusion when the men worked at a fire.

Five Alarms for Ice Cream Plant Fire

Blaze in Building Used for Manufacture and Storage of Ice Cream "Gets Away"—Ammonia Troublesome

THE fire described in this article of the series on administration occurred in a large eastern city, with a modern fire department.

The property involved is shown in the sketch herewith.

The group of buildings affected by the fire included the following:

A large brick ice cream plant mainly of two stories height, with five extensions employed for various purposes such as engine room, cold storage apparatus, freezing tanks.

The sketch shows the layout of the various units.

Directly across a spur line railroad were a warehouse, backed up by another frame warehouse three stories in height; a 5-story brick hotel building of old construction; a 6-story factory building with various occupancies on the different floors. This latter building was also of brick construction. Being of great age, and filled with comparatively heavy machinery, it constituted a serious hazard once fire reached it.

To the rear of the ice cream plant was a public garage one story in height and at the time of the fire was well filled with vehicles.

Near the receiving end of the plant was a group of four fuel oil tanks of approximately 40,000 capacity.

The Department

The department in the city in which this fire occurred consists of 18 engine companies, 5 hose companies, 12 truck companies and one water tower.

Response to the first five alarms at the location of this fire is as follows (company numbers assigned for convenience only): First alarm, Engine Cos. Nos. 1, 2, and 3; Hose Co. No. 1; Ladder Co. No. 1 (aerial truck); Ladder Co. No. 2.

Second alarm, Engine Cos. Nos. 4, 5 and 6; Hose Co. No. 2 and Ladder Cos. Nos. 3 and 4.

Third alarm, Engine Cos. Nos. 7, 8 and 9; and Ladder Cos. 5 and 6 (Ladder 5 being equipped with aerial truck).

Fourth alarm, Engine Cos. Nos. 10, 11 and 12; Ladder Co. No. 7.

Fifth alarm, Engine Cos. Nos. 13, 14 and 15, and Ladder Co. No. 8.

All ladder companies with the exception of those noted as aerial trucks, were equipped with city service trucks.

All pumpers were either 700 or 750 gallon per minute capacity and motor driven.

Water pressure was excellent in the neighborhood of the fire, there being plenty of hydrants on good sized mains and approximately 55 pounds in the mains at all times.

The Fire

The fire apparently started around 1 o'clock in the morning of a very hot summer night and had been burning for about an hour when discovered at 2 o'clock. At the time of the discovery, when made by a patrolman, the engine room and the cold storage room were well ablaze.

The officer noted a strong odor of ammonia and upon investigation discovered the fire.

A strong breeze was blowing from the southeast, carrying the ammonia fumes to the rear of the old hotel building, the rear windows of which were mostly open.

A box was pulled and the first alarm assignment responded. Engine Company No. 1 was stationed at hydrant No. 4 and a single line stretched to along the spur track to operate on fire in engine room.

Engine Co. No. 2 was placed at hydrant No. 5 and a single line stretched to the same building through separating room to operate on rear of engine room fire.

Engine Co. No. 3 was placed at hydrant No. 1 and a single line stretched up the alley between the hotel building and the 6-story factory building, but this line could not get near enough to operate on the fire on account of the ammonia fumes.

This line was subsequently shifted to rear of plant and operated through pan room to check the fire from entering the laboratory office and ice storage room.

Noting the danger of the ammonia fumes to the occupants of the hotel, members of both truck companies were sent to this building to clear out the guests.

The remaining members of the second truck company were assigned to assist the various lines in entering the fire building.

The fire apparently had gained far too much headway for the first alarm assignment to handle so a second alarm was transmitted by the battalion chief present.

About the same time the second alarm assignment arrived there was an explosion at the rear of the ice cream plant, apparently in the refrigerating plant room, and immediately thereafter the ammonia became too dense in the ice cream plant for the men to operate in any of the rooms.

The various lines withdrew and endeavored to operate from a distance through the ice cream plant main building but little headway was made.

Engine 4 was stationed at hydrant No. 6 and a single line stretched around the east end of the plant, operating across the frame platform onto one of the buildings which was well ablaze.

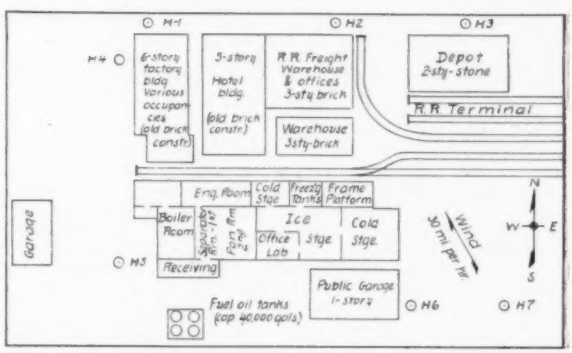
Engine 5 was placed at hydrant No. 7 and a single line stretched alongside of the line from Engine 4.

The fire continued to increase in intensity and it was evident that unless quick action was secured and effective work done the entire ice cream plant would be lost.

At this time the chief of the department "rolled in" and noting the seriousness of the situation transmitted third and fourth alarms.

Before the apparatus on the third and fourth alarms arrived, fire had jumped the railroad tracks and entered the hotel building.

The warehouse, too, alongside the hotel building was seriously endangered by the intensity of the fire.



The detailed assignment of lines from Engine Cos. 7, 8, 9, 10, 11 and 12 on the third and fourth alarms is not known. But the general procedure was to operate from the windward side of the fire.

Attempts were made to cover the exposed warehouse and hotel building at the rear, but these efforts were to no avail.

Fire was gaining headway in the hotel building and lines from the third and fourth alarm companies were stretched into the hotel building but were not able to hold their positions on account of the intense fumes entering the building from the ice cream plant at the rear.

A little later the warehouse was seen to take fire and efforts were then directed from east end of the warehouse to hold the fire. In view of the fact that ammonia fumes did not seriously bother the men at this point comparatively satisfactory progress was made. But the hotel fire increased in intensity and soon the 6-story factory building alongside was seen to become involved.

A fifth alarm was sent in at this time, bringing out in addition to the apparatus from the 1st, 2nd, 3rd and 4th alarms, Engine Cos. Nos. 13, 14 and 15 and Ladder Co. No. 8.

When this apparatus arrived the warehouse was fully ablaze, the hotel building was beyond saving, the 6-story factory building was involved and the freight warehouse to the rear of the burning warehouse was also in serious danger.

The wind seemed to die down somewhat and apparently the ammonia supply was being depleted for it was possible for the men to get at closer range.

When it was found that the ice cream plant was beyond

saving, the main efforts were directed toward holding the fire in the 6-story factory building and the railroad freight warehouse.

Concentration of lines in both of these buildings resulted in saving the railroad freight warehouse with comparatively small damage. The 6-story factory building, in view of its old construction, its heavy occupancy and the oil soaked condition of its floors, could not be saved.

The fire did not get beyond the block of buildings shown.

When the fire was finally brought under control, it was found that the ice cream plant was completely destroyed, the garage to the rear of it was only scorched, the 5-story hotel and 6-story factory were destroyed as well as the warehouse alongside of the railroad tracks. The railroad warehouse was saved with but slight damage.

Fire did not spread to the depot nor to other buildings surrounding the block shown above.

Nor did the fire reach the fuel oil tanks at the read of the ice cream plant.

The Editor's ideas on the handling of this fire will be given in the next issue of this journal.

LESSONS OF NETHERLANDS HOTEL FIRE STRESSED IN UNDERWRITERS' REPORT

New York Board Makes Know Findings After Investigation—Some Interesting Suggestions—Importance of Fire Protection and Extinguishing Facilities

By WM. JEROME DALY

A DEFICIENT and incompleted standpipe system, coupled with the additional hazards of wooden scaffolding, lack of elevators, plus an absence of authority by the fire department in that it has no jurisdiction over the erection and equipment of standpipe lines in buildings during construction, in a nutshell, are the important features of an official report on the recent Hotel Netherlands fire in New York just issued by the New York Board of Fire Underwriters and signed by William B. White, superintendent of the Bureau of Surveys and concurred in by W. G. Hayne, engineer and George W. Booth and the late Ira H. Woolson, consultants.

The survey bears out completely the hurriedly made observations and report of the fire as published in FIRE ENGINEERING in the issue of April 20.

Standpipe Not Connected to Tank and Uncapped

The Underwriters report characterizes the hotel as "a modern 38 story hotel, fire resistive type covering an area of 12,000 square feet." The report states that the construction of the building had progressed to the point where its exterior was practically finished except for the top portion of the tower, where considerable frame scaffolding surrounded the building.

"A nearly completed standpipe system was the only fire protective equipment within the building" the report goes on, and then is explained what the standpipe system consisted of.

"The standpipe system consisted of two 8" standpipes extending from the sub basement to the 23rd floor, with one also continuing as 8" to tanks in the top of the tower. Beside the tanks in the tower, intermediate tanks were installed on the 23rd floor and on the 12 floor with cross-connections between the two standpipes in the sub basement, on the 9th and on the 22nd floors. When completed the system will be equipped with a fire pump in the sub basement directly connected into the line and also four 6" siamese connections on the street for the Fire Department, two being on Fifth avenue and two on the 59th street side of the building.

"The system was completed at the time of the fire to a point where all of the tanks had been installed and the 8" standpipe reached to the tank in the tower. The standpipe, however, *had not been connected to the tank and was uncapped at this point.* The 8" cross-connection on the 22nd floor was not completely made-up and the fire department reports that until its men inserted a plug it *was open at this point.* Inspection of the standpipe system shortly after the fire showed that all four of the 6" siamese connections were finished to a point where the check valves had been installed but only one of these connections extended to the street and was provided with the regulation siamese head; all of the other connections terminated in the building and *were unplugged, except the one in the basement.*

Siamese Connection Not Visible from Street

The siamese connection extending to the street was *located behind a board fence* on 5th avenue, which enclosed the first floor and formed part of the sidewalk bridging in such a manner *that it was not visible from the street* and the siamese connection was apparently known only to those familiar with the system.

"The fire department upon its arrival, not knowing of the existence of the standpipe siamese connection on 5th avenue, made connections to the 2½" hose outlets of the standpipes on the 1st, 2nd and 3rd floors but were unable at that time to send water to the upper portion of the building where it was needed *because of the open eight-inch pipe on the 22nd floor.*

"The fire department is of the opinion that they could have delivered water to the top of the building if the standpipe had been in proper working condition. They report that because of the uncapped connection on the 22nd floor that it was impossible to obtain or maintain the pressures required. Inspection by this bureau also revealed that it is questionable whether or not a check valve in one of the uncompleted siamese connections in the basement seated properly. Appearances indicate that water also escaped from the system in this manner. The operations of the fire department were further hampered because of the lack of a suitable elevator or hoist to carry firemen and hose to the upper floors."

Condemns Scaffolding without Fire Extinguishing Equipment

The conclusions contained in the printed document, when abbreviated, are as follows: "The practice of erecting large combustible hoistways, scaffolding or similar structures either within or on the outside of a building of such height * * * with little thought to fire preventative or fire extinguishing equipment, is deplorable. At least the supporting members and enclosure of such structures should be of incombustible material and should be protected by suitable extinguishing equipment.

Neglect to Install Standpipes in Uncompleted Buildings

"The effective operation of the Fire Department in tall buildings is almost wholly dependent upon the proper operation of standpipe systems whether the building is completed or not, and when such systems fail to operate as intended, the efforts of the Fire Department may be so seriously hampered that they will be almost futile and the fire loss proportionately excessive.

"The importance of installing standpipes in buildings in course of construction and maintaining them in proper condition as the building is being erected * * * *has been largely disregarded. Inspections made by this bureau have revealed that buildings have reached 17 stories or over without any semblance of a standpipe being installed or work on the same started.*"

The report then recites the provisions of the law which require useful standpipes in buildings in course of construction once they reach 85 feet in height and the report continues:

Recommends Stringent Measures to Insure Protection

"Evidently stringent measures such as 'stop orders' or the revocation of licenses are necessary to insure the carrying out of this requirement, as it is entirely impossible as well as it is impracticable for an inspector to actually police the building."

(*Continued on page* 508)

The Man Who Has "Nothing" to Do

Firemen who complain of being exceedingly busy or about their trying position in life will do well to consider Chief Irving H. Marston of North Hampton, N. H. In addition to fighting fires he is chairman of the town board, chief of police, town moderator, member of the Board of Health, tax assessor and overseer of the poor. He is also notary public and justice of the peace. As a definite means for a livelihood, he is the town barber and manages a general store and lunchroom as a side occupation. Undoubtedly, the official pass word there is, "See Marston." At the left is Mr. I. W. Marston, barber of North Hampton, N. H., and at the right is Chief Marston of the police department. What a different barber-shop picture there would be if a fire broke out!

New Rules of New York Fire Department

This Fourteenth Installment Covers Sections Dealing With the Bill of Dress, Including Coat, Overcoat, Trousers, Cravat, Etc.

FOLLOWING is the fourteenth installment of the "Rules and Regulations of the Uniformed Force of the Fire Department of the City of New York," just issued by that department, and which are to be published serially in their entirety in FIRE ENGINEERING. *This book has been compiled and edited by Captain John J. McCarthy, of H. & L. No. 43, detailed in charge of the Division of Public Assembly at Fire Headquarters, who worked under the personal supervision of Chief John Kenlon. This installment includes sections covering the Bill of Dress, including Coat, Overcoat, Trousers, Cravat, Gloves, Shoes, Etc.:*

Bill of Dress (Continued)

COAT

SEC. 309. Chief of Department—A double-breasted, close-fitting sack coat, made of dark blue cloth, pure indigo dye, weighing not less than 24 ounces to the yard; but to button close to neck, with rolling coller, and to reach to a point midway between the hip joint and bend of the knee; to have eight medium sized regulation buttons on each breast, grouped in pairs; the cuffs to be made to fit the wrists and to be closed with three small regulation buttons; to have a pocket on the inside of each breast; the coat to be lined with red cloth or flannel, and the sleeves with linen. The prescribed insignia of rank to be placed in the end of collar on each side.

Deputy Chiefs of Department and Chiefs of Battalion—Same as Chief of Department, excepting that the buttons shall be placed equi-distant.

Company Officers—Same as Chief of Department, excepting that the buttons shall be seven in number on each breast, placed equi-distant.

Engineers of Steamer and all other members—Same as Company officers, excepting that they shall be single-breasted and have six buttons.

Summer Wear—Chief of Department: A double breasted close-fitting sack coat, open at front of neck, with notched lapels, of pure indigo wool dyed cloth finished flannel, weighing not less than fourteen ounces to the yard. Coller to be not less than 2½ inches in depth at rear, and not less than 1¾ inches at points of notch. It shall be cut to fit under overcoat, and in length it shall reach to the ends of thumbs. It shall have a seam in the back; all seams to be plain with quarter inch single stitched edges, and have six medium sized regulation buttons on each breast, grouped in pairs, to be spaced between 5¼ inches and 6 inches center to center, horizontally, according to size, the bottom button in no case to be less than 8½ inches from bottom of coat; the buttons on left breast to be countersunk. Sleeves shall be cut so as to be conveniently worn inside overcoat, with regulation fireman's single-stitched cuff, having three small regulation buttons. To be quarter-lined, with one pocket on inside of each breast. Insignia to be worn at the ends of collar, facing edge.

For all Other Officers—The same as for the Chief of Department, except that they shall have five buttons on each breast spaced three inches apart, vertically, the bottom buttons to be not less than 8½ inches from bottom of coat.

For all Other Members—A light coat shall be worn, made of dark blue cloth finished flannel, pure wool indigo dye, weighing not less than fourteen ounces to the yard and in all other respects as above prescribed for the cloth uniform except that it shall be single breasted, with six buttons and quarter lined.

OVERCOAT

SEC. 310. Chief of Department—A double breasted sack overcoat, of best 30 ounce dark blue cloth, pure wool indigo dye, open at front of neck, with lapels and convertible collar. (The collar shall be not less than 4 inches deep at rear; at point of lapels it shall have turned-in seams, handsewn, and, when converted it shall raise in the front only, and meet evenly at points of notch). Points of collar to be slightly rounded, and, when converted, shall cover top buttons of coat.

In length it shall reach to the knee, and shall be of weight and quality equal to the standard in the office of the Chief of Department; to have six large regulation buttons on each breast, grouped in pairs, spaced horizontally according to size, but shall be not less than 4½ inchest apart, and there shall be a single large regulation button under each lapel to be used when coat is buttoned to neck; three small sized regulation buttons on each sleeve at the cuff which shall have ornamental double stitching.

It shall be lined throughout with scarlet cloth lining, weighing fourteen ounces to the yard, with fast black venetian material in yoke and sleeve lining; sleeves to fit snugly at wrists; edges and seams to be raw edge, with ½ inch double stitch; no outside pocket, but one inside of each breast, with one small inside cash pocket at lower left side; pockets to be piped in cloth tongue.

It shall be slightly form-fitting, with seam in the back, with center vent spaced from five to seven inches below the waistline, no hook or other ornamental stitching at point of vent. It shall be fitted so that the under coat shall be visible when collar of overcoat is open.

For All Other Officers—The same as for the Chief of Department, except that there shall be five large regulation buttons on each breast spaced approximately 4½ inches apart vertically.

For All Other Members—A double breasted sack overcoat of dark blue pure indigo wool dyed cloth, weighing 30 ounces to the yard of 54 inch width; buttoned to the neck with six large regulation buttons on each breast placed equi-distant vertically; upper button on each side to be at point of collar-bone, the spread depending upon size of breast, but it shall not be less than twelve inches, and shall converge downward with revers so that the buttons are not less than six inches apart, horizontally at bottom; buttons on left side shall be countersunk. Collar to turn down, four inches deep all around; stand of collar 1½ inches in rear running to ½ inch in front; to fasten at points of notch with concealed hook and eye; corners of collar and revers to be slightly rounded, but collar shall not cover top buttons.

The coat shall have revers, front, sidebody and back; the back to be made with center seam, with vent 12 inches long, having no hook or ornamental stitching at point of vent; revers sewed on.

In length it shall reach a point two-thirds between the hip and knee; to be lined with red cloth or flannel, stitched out on padding across front and back ¾ inch apart to waist line, with lining left open at bottom of front; one pocket on inside of each breast and one small inside cash pocket on lower left side, piped in cloth tongue. All edges and seams to be raw edged, ¼ inch double stitched. Sleeves to be close fitting, with ornamental fireman's single stitching on cuffs, each cuff having three small regulation buttons. Coat shall be cut so as to be slightly form-fitting.

Members may purchase uniforms or parts of uniforms wherever they wish, subject to the provisions of the regulations as to inspection.

TROUSERS

SEC. 311. All Members—Same material as coat, with lap seams; to be cut to fit close around the waist, but loosely around the legs, to admit of their free use.

CRAVAT

SEC. 312. All Members—Black silk or other black material of good quality, to pass around the inside of collar and tie in four-in-hand style in front.

GLOVES

SEC. 313. All Members—White Berlin or lisle thread, to be worn on the occasion of parades, inspections, funerals during the spring, summer and fall seasons, and during visits to quarters by officials when advance notice is received, and at other times when especially ordered.

The wearing of gloves, with overcoat is optional with members, except when appearing during the winter months, at the functions named above. On those occasions, and, when members desire to wear gloves in public, they shall wear suede gloves, dark gray throughout.

SHOES

SEC. 314. All Members—Black leather throughout, with dark buttons or hooks.

SHIRT

SEC. 315. All Officers—Plain white linen or muslin, with white starched rolling collar (with cravat), of sufficient height to show at rear of overcoat collar; collar opening to be of medium width; except that for the period designated for the

(*Continued on page* 500)

TEN FIELD SECRETARIES TO CARRY OUT EDUCATION PLANS OF N. F. P. A.

Public Should Treat Fire Waste as a Plague and It Should Be Fought as Such—Fire Marshals Granted Chapter Membership

INSTEAD of the present two field secretaries of the National Fire Protection Association, plans were made at the annual convention held in Chicago, May 9-12 to send out ten such engineers. Irving T. Bush, chairman of the finance committee and sponsor of the plan, outlined a way to raise $500,000 to finance such work. An outline of the problem was presented in a booklet, "Waging Systematic War Against Fire," which was distributed at the convention. This convention made a high attendance mark—570 registered.

The Fire Marshal's Association of North America was inducted into the association with chapter membership.

At one of the meetings, a statement was made that fire should be regarded as one does the yellow fever, and it should be treated much in the same manner as the medical profession treats the fever. Mr. Bush said that one of the chief reasons for the utter disregard of fire was the illusion of the American public that insurance people pay for fires. It is only the function of insurance to distribute the losses, but it can not recreate property.

The fire hazards in the modern sky-scraper was also considered and reference was made to the Sherry-Netherland hotel fire in New York. The American skyscraper, in the opinion of the men, is not a bad risk—it is as foolish to consider such property a bad risk as it is to say that a tall person is a bad health risk.

The skyscraper is found in many of the large cities, but with propert equipment it is safe. Instead of fighting a fire from the outside, fire in a tall building must be fought from the inside with the aid of a standpipe. The New York hotel fire demonstrated that twenty lengths of hose was the maximum vertical length of a hose line.

Another point considered was the loss of life due to panic. A warning was issued that large places of public assembly should be made "panic-proof" as well as fire-proof. Along with the theatre, the department store should take warning. The country has been fortunate in not having a department store holocaust, but unless precautions are taken, it is only a matter of time before such a fire may break out. Department stores are so large at present, that one must inquire as how to get out and where to find the nearest exit. The progressive stores are safeguarding life, but there are many store-managers who have not considered the problem of such protection.

T. Alfred Fleming, chairman of the committee on Fire Prevention Week, reported that due to the fire prevention programs, the fire losses during the month of October were the lowest of any month in the year. He said, "People used to say of fire what they said of disease—it was an act of God. But we know differently today."

Hugh H. McLellan, fire marshal of New Brunswick, Canada, told the members that fire losses in his province had been cut forty per cent by compulsory prevention classes in public schools and rigid arson investigations. A special text book is used in the schools, and since the plan was started in 1922, the fire losses have been cut from $48,000,000 a year to $28,0000,000.

Questionnaires were sent to fire chiefs of cities with a population of 20,000 and over. The data collected showed that in eighty municipalities, there was no fire during Fire Prevention Week, and in fifty-seven cities, the fire loss was less than sixty-dollars.

At the final session of the convention, Dana Pierce of Chicago was elected president of the National Fire Protection Association. The other officers are as follows: Allan M. Schoen of Atlanta and Frank C. Jordan of Indianapolis, vice-presidents; secretary-treasurer, Franklin H. Wentworth of Boston; executive committee, Albert T. Bell, Atlantic City, chairman, Samuel D. McComb, New York, Hickman Price, New York, J. Sanderson Trump, Philadelphia and C. I. Ingalls, Oklahoma City.

Gary, Ind., Has Station Manned by Negroes—The new fire station erected in Gary, Ind., is to be manned by a colored company in charge of two white officers.

Capay Valley, Cal., Purchases Fire Apparatus—A Buick truck equipped with fire-fighting appliances has been ordered for Capay Valley, Cal.

Hazards High in Harlem Section of New York City—Numerous fire hazards have been found in the Harlem colored section of New York city by the inspectors of the New York Board of Fire Underwriters. Of 4,789 buildings visited, 1,986 were found to be in bad condition, or a ratio of one to four.

HOW ONE CHIEF CHECKMATED OPERATIONS OF AN ARSON GANG

Incendiaries Were Becoming Bold in Their Operations—Chief Caused Payment of Insurance to be Delayed—Then Detectives Did the Rest

By CHIEF GEORGE M. BOWER
Fire Department, Rome, N. Y.

THE firebug is the bane of the chief's existence, and often causes him many sleepless nights. The article which follows tells of a good plan adopted by the head of one department in checkmating the activities of an arson gang:

Every city has more or less incendiarism, and every so often there will be a period in which the firebug makes himself evident, with fire after fire occurring which, when you investigate, shows evidence of incendiarism. In the year 1921 we experienced an exceptionally large number of fires among the foreign population of Rome. The motive for these fires was evidently excess insurance. I at once got in touch with the General Adjustment Bureau, of Syracuse, N. Y., and requested them to cooperate with me by refusing to pay the losses promptly.

Chief George M. Bower, Rome, N. Y.

The Adjustment Bureau worked well with me and payment was delayed on some of these losses for ten months. The result was that the individual who had a fire, not being able to collect his insurance money for so long a period and in consequence having to forego the replacing of his furniture and the repairing of his property, lost all ambition to have another fire.

I also notified the National Board of Fire Underwriters in New York City, and they at once sent me two detectives. I went over the situation with them, and in about a week or ten days they reported to me that there were seven men in the gang engaged in setting fires. The detectives, however, wished to delay action until they could catch these individuals in the act.

In the meantime something happened and the leader of the firebugs left Rome and went to Whitesboro. From there he removed to Utica, from Utica to Herkimer, and from Herkimer to Barneyville.

At Barneyville an arrest was made, and the prisoner was taken to Utica. He was given two trials, and even though he was not convicted, the affair had the desired effect in stopping incendiarism.

So my word to chiefs troubled with firebugs is "Make an arrest if at all possible, and don't pay losses promptly!"

Sterling Sirens Sales Made in Pennsylvania—Honey Brook, Atglen and Lionville in Chester County, Pa., have purchased Sterling fire alarm sirens.

Charles Jenner, Chief of London, Ont.—Charles E. Jenner has been appointed chief of the fire department in London, Ont., Canada, to succeed Chief John Aitken who is retiring after fifty years of service. Mr. Jenner has been an officer of the Winnipeg department for a number of years.

Charleston, S. C., Has Bad Warehouse Fire—Eight firemen were injured when the fire department turned out to fight a fire in a huge warehouse in Charleston, S. C. The men suffered from eye burns and smoke. This fire was followed by another one at Meeting and Market streets.

Baltimore Office of the Bi-Lateral Hose Moves—The Baltimore, Md., sales offices of the Bi-Lateral Fire Hose Company has been moved from the old location at 15 E. Fayette street to 607 Munsey Building, Calvert and Fayette streets. The office is in charge of Roy J. Sullivan, district manager, who has charge of Maryland, Delaware and southern Pennsylvania territory.

WITH THE EDITOR

Student Rioters and the Fire Department

Fairly often one reads in the daily press of the clashes between student bodies in the various colleges. Sometimes these students in their youthful exuberance step beyond the bounds of lawfulness, and make a general nuisance of themselves. This forms a problem for the police, as they naturally hesitate to take extreme measures.

Frequently the job of calming the rioters falls upon the fire department. This was true of the Annapolis, Md., Fire Department, when the Johns Hopkins University boys become troublesome. In this particular case the sophomores attempted to break up a dinner given by the freshmen of the university, and the affair assumed serious aspects when the police were fired upon by the rioters.

However, after several of the students had been injured, the fire-fighters were called and directed streams upon the rioters with considerable effectiveness. When a few of the most persistent had been carried off their feet by the streams the rest fled and the incident ended.

While this is by no means the first time good streams have dampened the ardor of rioters, both college and otherwise, such a task cannot be said to fall within the realms of fire fighting, nor should it be endorsed as a duty of the fire force.

But the fact that fire departments have shown themselves capable of handling such situations also indicates that they are particularly fitted to handle almost any emergency which may arise.

Residential Inspections in May

The International Association of Fire Chiefs has set aside the month of May as the period especially adapted to "home inspection."

There is considerable logic in the choice of this month. In the first place, May is the period almost universally set apart by the housewife for her annual or semi-annual house-cleaning. It is therefore a particularly favorable time for the elimination of rubbish and other fire hazards.

Then the weather is apt to be in the fireman's favor, being neither too hot nor too cold to make such inspection work a burden.

In such work the chief should use considerable judgment in selecting the men to carry it through, for it requires the exercise of no little tact. The men assigned should also receive very detailed instructions as to the manner of conducting inspections.

This is particularly important, as the actions of the men engaged in these inspections will have a very great influence on the attitude of the public toward the fire department. Let these inspectors thoroughly understand that their mission is one of helpfulness to the householder; they must impress this fact upon the people they visit.

If advice on fire prevention and protective matters is asked, let the men be prepared to give it freely and intelligently. If violations of fire laws or safety measures are discovered in their visits, let the inspectors carefully point out such violations, the reasons why they are wrong or dangerous from a fire standpoint and impress upon the violators that the department is only too ready to co-operate in any way possible to help eliminate the trouble.

Of course, if the violators are obdurate and will do nothing to correct the hazard, then it may be time for severer measures.

A little time spent by the chief in the careful instruction of the men detailed to such inspections should prove of great help to the department in many ways.

Retaining the Chief in Office

Politics is bound to "play hobs" with the fire department whenever and wherever it gets a hold upon that organization, but perhaps one of the worst features of such domination is the uncertainty it creates in the tenure of office of the fire chief.

There is nothing so demoralizing to the fire department, its discipline and its efficiency, as the knowledge by the men that their chief is the tool of some political "boss," or some political machine, and holds his job by the grace of this individual or party, regardless of fitness for the position.

Equally disturbing are the frequent changes which are apt to occur in a unit dominated by politics. Such a situation apparently prevails in the fire departments of southern Illinois, and the Egyptian Fire Fighters Association, an organization composed of the fire departments of that section, has taken cognizance of it in a resolution adopted at a recent meeting, asking for the support of the civic bodies of the various cities and village in retaining the fire chief, when efficient, in office.

In this section one city—Marion, county seat of Williamson county—has had in the short space of seven years, seventeen fire chiefs. Other towns in the section can show almost parallel records. The only wonder, in cases of this kind, is that it is possible to maintain even the semblance of organization in a fire-fighting force.

Southern Illinois is by no means unique in such a state of affairs. Throughout the country, though fortunately the number is gradually lessening, there can be found fire departments in which politics plays an all-

important part, and in which the chief's office is the football of the political powers in the saddle. There seems to be a very distinct opportunity within the grasp of the civic organizations of various towns and cities suffering from this complaint to ameliorate the condition. Such bodies can and usually do wield considerable power in the affairs of their communities, and their say-so will prove effective with the politicians. Their endorsement of the fire chief and recommendation for his retention in office for the good of the community, therefore, should carry much weight.

Of course one of the best plans, whenever feasible—and it usually can be accomplished by an organization of determined citizens—is to take the department absolutely out of politics, and make the chief's office dependent solely upon his efficiency and attention to duty. Where civil service is not in vogue this plan will go a long way toward eliminating the trouble incidental to uncertain tenure of office of the chief.

Boston Has Fire Alarm Anniversary

In order to celebrate the 75th anniversary of the installation in Boston of the first electric fire alarm telegraph system in the world, an exhibition was arranged by Superintendent George L. Fickett in the Boston fire alarm headquarters in The Fenway.

Early types of fire boxes and photographs of the first fire alarm office and operators were shown. The exhibits included many

Fire Alarm Exhibit Attracted Much Attention

Early fire alarm exhibits and photographs and a display of modern equipment was arranged in the show window of one of the large Boston, Mass., stores.

different kinds of alarm boxes showing the development from early days to the present perfected system of the Gamewell Company.

Dr. William F. Channing, of Boston, is credited with being the first to develop a fire alarm system. In 1845 he originated his scheme and in 1851 the city of Boston appropriated money for the project, the first alarm being transmitted on April 29, 1852. Moses G. Farmer, of Framingham, Mass., assisted Dr. Channing in many of his experiments.

During the week of April 25 the members of the Boston fire and protective departments as well as the general public were invited to visit the fire alarm headquarters to inspect the exhibition.

Supt. Fickett was aided by Richard Donahue, assistant superintendent, and by John Galway, supervising operator, in entertaining the visitors. A portion of the exhibit was displayed in the window of a downtown department store and attracted much attention.

HARRY BELKNAP.

Muscatine, Ia., Forms Firemen's Relief—A firemen's relief association has been formed in Muscatine, Ia., and Harry Price has been elected president.

Decatur, Ill., Opens Station No. 6—Station number six, the new fire house in Decatur, Ill., has been officially opened. Many articles were donated for the comfort of the firemen.

Bookings of "The Fire Brigade" Increase

Additional bookings of "The Fire Brigade," the motion picture sponsored by the International Association of Fire Chiefs, are being received daily. The following list contains the additional bookings that have been received since the publication of the lists in the previous issues of FIRE ENGINEERING.

Due to the large number of bookings that are being received for "The Fire Brigade," space does not permit a listing of all the theatres that have booked the motion picture. Instead a listing will be made of the first date at which "The Fire Brigade" is to be shown in a municipality.

CITY	THEATRE	DATE
Arkansas		
Bentonville	Royal	June 29
Ft. Smith	Joie	May 30–June 2 (changed from May 30–31)
California		
Coachella	Paramount	June 9
Fairfield	Solano	June 10–11
Ft. Bragg	Liberty	May 26–27
Grass Valley	Strand	June 15–16
Indio	Egyptian	June 6–7
Navarro	Navarro	July 23
Navada City	Broadway	June 20–21
San Bernardino	West Coast	June 13–15
Colorado		
Aguilar	Colorado	July 14–15
Eads	Eads	June 14–15
Manitou	Cameo	August 20–22
Delaware		
Laurel	Waller	May 26–27 (changed from July 18)
Seaford	New	May 18–19
Idaho		
Firth	Melba	June 21
Rupert	Wilson	June 22–23
Shelley	Virginia	June 19–20
Illinois		
Arcola	Arcola	July 18–19
Chrisman	Empire	July 22–23
Farina	Lyric	August 9–10
Galconda	Elite	July 20–21
New Berlin	Lincoln	August 9–10
Oakland	Grand	July 5–6
Pittsfield	K. P	July 28–29
Sullivan	Illinois	July 7–8
Vandalia	Orpheum	June 8–9
Indiana		
Bloomfield	Citadel	October 5–6
Colfax	Arcade	July 16
Cynthiana	American	August 26–27
Decatur	Adams	May 25–27
Ft. Wayne	Wells	September 11–12
Freelandville	Knox	August 26–27
Hillsboro	Sunshine	June 30–July 1
Liberty	Union	July 28–30
Oakland City	Storm	July 4–5
Oxford	Princess	August 7–8
Petersburg	Lincoln	August 15–16
Plainfield	Zaza	June 13–14
Seelyville	Pastime	July 13–14
Seymour	Majestic	October 13
Thorntown	Princess	July 29–30
Kentucky		
Danville	Kentucky	June 30–July 1
Earlington	Temple	June 7–8
Elkhorn City	Breaks	December 10
Greasy Creek	Star	December 9
Hellier	Hellier	December 8
Hickman	Rex	June 16–17
Litchfield	Jo Jon	August 27
Lynch	Lynch	September 13
Madisonville	Garrick	July 18–19
Wickliffe	Swan	May 27–28
Maine		
Dixfield	Tuscan Opera House	August 5–6
Pittsfield	Bijou	June 22–23
Togus	National Soldiers' Home	November 11
Maryland		
Curtis Bay	Pennington	July 30
Emmitsburg	Victory	June 24
Federalsburg	Temple	September 20–21
New Windsor	New Windsor	June 25
Thurmont	Gem	November 28–29
Massachusetts		
Adams	Atlas	July 3–4
Bridgewater	Princess	May 18–20 (changed from May 16–18)
Cambridge	Durrell Hall	June 20–21
Canton	Orpheum	June 22–23
Chatham	Orpheum	August 17
Dedham	Town Hall	June 25
Marblehead	Warwick	June 6–7
Needham	Needham	June 22–23
Rockland	Opera House	June 13–14
Stoughton	Orpheum	June 22–23
Topsfield	Town Hall	June 8

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QUESTIONS AND ANSWERS

Conducted by FRED SHEPPERD, B. Sc., M. E.

"He that questioneth much shall learn much"—BACON

NOTE—Readers of FIRE ENGINEERING are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified.

N. J. State Pension Act.

To the Editor:

Will you please give me an idea as to what constitutes the New Jersey State Pension Act for Firemen? How is the money raised for the pension fund? What percentage does the firemen pay and what percentage does the city pay?

Yours truly,
J. T. W.

Answer: The following information on the above question was furnished us by Mr. T. Howell Johnson, Treasurer of the New Jersey State Firemen's Association.

The Act referred to above is the N. J. State Pension Act and is entirely too long to reprint here. The correspondent can very easily read it by making application to some lawyer and referring to Public Laws of 1920, page 324, chapter 160.

The money for this Pension Fund is raised by 2% of the salaries of the firemen and policemen and 4% which is placed in the tax budget of the municipality. To this is added fines of police and fire departments, and gifts or subscriptions which may be received for the fund.

Philadelphia Battalion Chief Examination Questions

To the Editor:

Will you kindly answer the following questions in your Questions and Answers Department. These questions were recently given in the Battalion Chief's Examination.

Thanking you in advance I am,

Cordially yours,
S. A. H.,
Philadelphia, Pa.

Questions:

1. State how you would supervise a battalion giving attention to discipline and co-operation among the officers. Discuss fully.
2. Discuss the gasoline and steam pumper, giving your opinion as to the merits of each. Answer fully.
3. Describe the different kinds of gasoline motors used in the Bureau of Fire. Give details.
4. Describe fully the hazards attending fires in the following plants, and state how you would handle such hazards.
   (A) Baled rags.
   (B) Paint and varnish.
   (C) Dyeing and cleaning.
5. A fire occurs in an 8-story hotel of semi-fireproof construction at 3 a. m. When you arrive on the scene you learn that the fire is on the 6th floor and that smoke is coming out of the windows. The fire is located in a room in the center of the above floor. There are two 4-inch standpipes, one in the front and one in the rear of the building. There is one elevator located about the center of the building. State fully what you would do if you were in charge of the fire for twenty minutes after your arrival.
6. Describe the boundaries of the High Pressure District, stating fully how and when the system is operated at a fire.

Answer 1. A battalion chief is at all times responsible for the efficiency and discipline of men under his command. To insure the greatest efficiency, it is necessary that he supervise personally the work of his subordinates at stations and on fire ground, and also that he have first hand knowledge of the hazards of his district. To insure discipline it is necessary that he be strict, but at the same time impartial. He must see that justice is done in every case. If he cannot obtain a high degree of efficiency and discipline without resorting to the Board of Trial so much the better. However, when an offence or breach of discipline warrants it, he must prepare a report for the Chief making specific charges against those concerned.

In such cases he will also recommend the suspension of the offender. However, the most important step in maintaining discipline in fire companies is by company inspections. These inspections to be made at least twice a week. Such inspections should include a thorough survey of the building, equipment and personnel. Also a check-up on the company's journal.

The inspections must necessarily take into account the uniforms of the men—the condition of the uniforms and their style—whether of the standard or of non-standard design.

In administering discipline it is absolutely essential that no partiality be shown whether in granting time off or in assigning work in the various stations; this point must be foremost in mind. Be firm but fair. Permit no laxity—no deviation from the rules.

To increase co-operation among officers, means of co-operation must be pointed to the officers on inspection or at other times. Instances of failure to co-operate or to work in harmony must be called to the attention of company commanders. But this must be done quietly and in the presence of the offending officer only. Nothing breaks discipline down quicker than to criticise an officer in the presence of his men. Make it clear to the company officers that the first officer at a fire has complete command until a superior officer arrives. Make it clear that such officers arriving first at a fire must have the respect and obedience to which a superior officer is entitled.

Instruction of the captains in way to co-operate and in the methods of handling fires will go a long way toward developing the co-operation desired.

Answer 2. This question is so worded that it infers a comparison of the gasoline and steam pumpers from a pumping standpoint, and not from the standpoint of speed in getting to a fire.

The gasoline pumper, in its present stage of development, is equal to or superior to the old steam pumper. In addition, it is far simpler to operate and requires less attention than a steam engine.

Consider the question of stoking alone. One man was needed at all times to stoke the engine and keep the steam up.

With a gasoline engine it is only a question of setting the gasoline control lever at the proper position for the desired speed of the pump and then permit the engine to run continuously. In cases of emergency this makes it possible for the man normally assigned to the pump to give a hand at other work. In addition to its dependability, the gasoline pumper does not require the time necessary to get up steam as in the case of the steam pumper. This is a big factor in fast operation at fires, particularly in that the motor apparatus arrives so much quicker than the old horse drawn. Even if the horse drawn could travel as quickly as the motor pumper it would have to wait after it got to the fire to get up steam before it could operate.

Because of the fact that steam need not be maintained at all times in the boiler when the engine is standing in the station, as well as the fact that no fuel is being used except when the pump is actually in operation, a gasoline pumper is far more economical than a steam pumper.

The gasoline pumper has another economy in that it does not require a licensed engineer to operate it. This represents a saving in the salaries of the engine operators. With a steam fire engine, a separate classification of the men of the department—engineers—was necessary. The engineers received more than first grade firemen but since the advent of the gasoline pumper the position of engineer has been gradually passing out of the fire service. The present practice is to assign special men to the operation of the gasoline pumpers, although no additional salary is paid for this service.

Answer 3.—This question relates to local conditions and information is not on hand to answer it.

Answer 4.—(A) Three special hazards are incidental to fires occurring in baled rags. They are: 1. Absorbing by the rags of a great quantity of water which may cause the collapse of floors; 2. Swelling of the bales of rags when wetted and structural damage to the building and floor collapse as a result; 3. Fire burning concealed in the center of bale after fire on the outside has apparently been extinguished.

In handling fires wherein baled rags are present, no more water than necessary should be used on the bales. Careful use of water will prevent the swelling of the bales as well as possible collapse of floors due to bales absorbing great quanti-

ties of water. After fire has been extinguished bales should be opened up to make sure that no fire is still burning on the inside.

(B) In addition to the usual hazard incidental to fires in inflammable liquids, two special hazards are encountered at paint and varnish fires. The first of these is the possibility of explosion of inflammable vapors which are thrown off by paint and varnish when heated. The second is the possibility of paint and varnish flowing when afire and thereby spreading the fire. When handling fires in paint and varnish establishments, thorough ventilation should be provided at once. Water should be used carefully so as not to enter containers filled with these inflammable liquids. If the varnish vats are afire, water thrown in them may cause the varnish to be scattered in all directions and it may also cause the varnish to overflow, by filling up the vat. Such varnish when overflowing may carry the fire down stairs or along other channels.

Use foam extinguishers wherever possible on paint and varnish fires. Foam produced by these extinguishers floats on the surface and neither causes the paint to overflow nor scatters the burning fluid in all directions when the foam strikes the liquid as in the case of water. Water is used largely in cooling down vessels containing burning paints and varnishes. In so using streams, take care that water does not unnecessarily enter vessels.

(C) Dyeing and cleaning establishments are distinguished by the presence of volatile inflammables such as benzene, gasoline, etc.

Dry cleaning plants are apt to have on hand great quantities of highly inflammable liquids and frequently in open containers where garments are washed. These inflammable liquids mean explosive gases.

In fighting a fire around such an establishment, first provide thorough ventilation, then use foam apparatus if it is available. If water is to be employed, use it largely to wet down walls and to cool off containers in which inflammable liquids are kept. If foam apparatus is not at hand, then water must used in very liberal quantities to break the fire and drench it out.

Answer 5. Fire occurring at 3 o'clock in the morning in an 8 story hotel building would represent a very severe life hazard. The fire is burning near the center of the building and smoke is coming out of the windows on the street which would indicate a direct source of communication from the center of the building to the windows. This would mean that fire would quickly spread from the center of the building through the building to the street front thereof.

The problem does not state whether or not fire occurs in the high pressure district. It will therefore be assumed that it occurs in the low pressure district, as this will represent a more difficult problem.

Response will be assumed to be 3 engine companies and two truck companies on the first alarm.

As the fire is burning near the center of the building, and as the elevator shaft is located at the center, this would mean that the fire is in the neighborhood of the elevator shaft. There is danger of it entering the shaft and quickly spreading to the upper floors.

Due to the extreme life hazard, upon arriving additional alarms should be transmitted at once, preferably second and third alarms.

The fact that the fire is burning near the elevator shaft would mean that the elevator service will soon be out of commission.

As the halls in the building must reach the elevator shaft, fire burning around the shaft will have available means for traveling throughout the entire floor. If fire enters the shaft and goes upward it will leave the shaft and travel throughout the various floors on its way up.

Assignment of apparatus on the first alarm, and the action to be taken otherwise would be as follows:

First sound the hotel fire alarm if such is available and if such has not already been done.

Send members of the first truck company through the building to arouse the guests and to show them to safety by means of stairways. Problem does not state how many stairways are available but it is likely in a building of this sort that two will be at hand.

In view of the fact that fire is still burning in the center of the building, either or both of these stairways will be available for the escape of the guests, provided the fire is held.

Have two members of first truck company go to the roof at once to open up over elevator shaft so that fire will be drawn out of this channel and will not mushroom on the upper floors.

Second truck company to assist first truck company in getting the guests out of the hotel and raising ladders for use by engine companies.

First engine company go up into building by means of elevator, if it is still available for use, to the fire floor, connect a line to the 4 inch standpipe at front or rear of building and stretch line to fire.

Second engine company also go up to the fire floor and utilize other 4 inch standpipe with fire department line of hose.

These two engine companies, if fire does not force them to retreat, can hold the fire from spreading until the building can be emptied.

As the problem seems to infer, the fire must have gained considerable headway to be discharging smoke from the windows at the front of the building. If this is the case, it may not be possible to utilize either or both of the standpipes on the fire floor. If such is the case the engine companies should stretch their lines from the floor below the fire floor up stairways to the fire.

The third and fourth engine companies go to the 4th floor and each stretch a line by means of stairways to the fire floor. This will give four streams on the fire from the two four inch standpipes.

One engine to be so stationed as to supply each standpipe.

Upon the arrival of the first apparatus on the second and third alarm companies, assignment will be made as follows:

Line stretched by ladders or fire escapes up to fire floor both front and rear; lines stretched by fire escape or ladders to floor above fire floor to check fire from spreading on this floor from the shaft.

Additional truck companies arriving to make a survey of the building to make sure that fire has not dropped through vertical shafts or is not spreading through channels which may have been overlooked by the first companies on hand.

It is most essential that either or both of the stairways be saved for use by the guests in the hotel. This point should be firmly borne in mind when the first companies are put to work.

If it is found upon arrival that fire is spreading toward either or both of the stairways, lines should be stretched from floors below to cover these points.

The first consideration is always the saving of life, and only after life has been saved should the department devote its energies to bringing the fire under control.

Apparatus of ladder companies responding with the second and third alarm should be so placed as to enable the engine companies to get lines in on the fire floor and the floor above. There will not be such great danger from fire dropping to the floors below because lines can easily cover these points. The spread of the fire to the floors above is the most serious means through which the blaze may extend. These must be covered first.

In the event that fire is getting away from the department no time should be lost in transmitting additional alarms.

But in view of the fact that the fire is apparently confined to a comparatively small portion of the building it is believed that a three alarm assignment can easily handle the blaze.

Answer 6. This question is one which would necessitate data on your high pressure system and which is not available.

It can best be answered by checking over your city map of the water system which will be found in the office of the Water Department.

Explosion of Extinguisher

To the Editor:

Each year at our county fair, I have put on a fire prevention show for the local fire department. In the exhibit I usually have a forty-gallon soda acid extinguisher handy for emergencies.

Last year, in removing the exhibit I emptied the soda solution out on the ground and took the tank to the fire department headquarters where it stood for about one week. The acid bottle was not emptied but it was removed from the tank.

On taking the head off the tank to wash the container, I noticed a gas pressure, and having heard that this type of extinguisher using soda would make a carbonic acid gas which in itself is known as a fire extinguishing element, I struck a match just to see what effect the gas would have on the flame. A very loud report equal to the noise from a shot gun was the result. A blue flame shot out from the tank for a distance of about five feet.

Will you please tell me why this gas was so explosive?

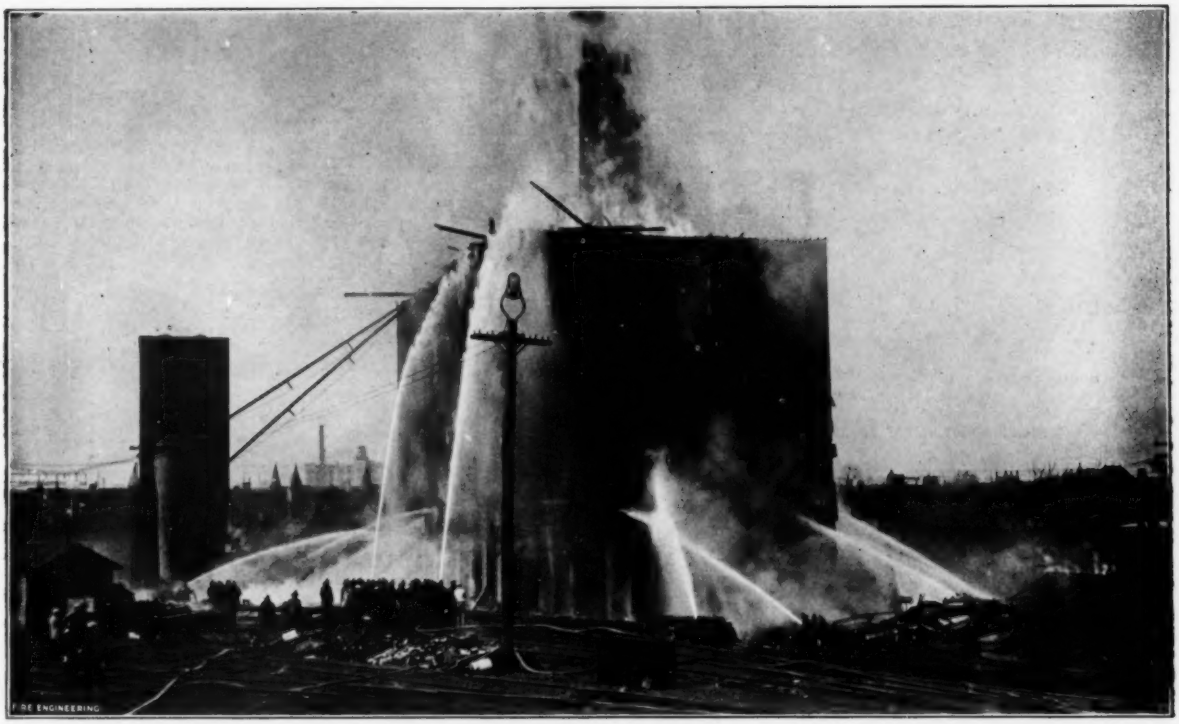
Very truly yours,

M. L. L.

Ventura, Cal.

Answer: It is possible that the explosion of your fire extinguisher was caused by the presence of hydrogen gas. During the latter part of the war quite a number of explosions were caused through this gas being discharged in submarines incidental to the charging of storage batteries. Hydrogen is highly inflammable when in contact with air, and it is possible that this is the gas which caused your trouble.

Due to the fact that sulphuric acid is used in storage batteries such as are employed in submarine service, and also the fact that hydrogen gas is given off during the process of charging, it is very possible that the presence of acid in the extinquisher after the soda solution was discharged generated hydrogen gas which was ignited when you struck the match.



Those in the Residences Near the Grain Elevator Fire in Philadelphia Were Forced to Leave Their Homes Because of the Intense Heat and the Impending Danger

PHILADELPHIA GRAIN ELEVATOR BLAZE DEVELOPS INTO 5-ALARM FIRE

Workmen Trapped on Roof Just Escape in Time—Flying Embers Endanger Nearby Homes and Tracks of Pennsylvania Railroad

FIRE completed that which a crew of workmen planned to do conservatively. An alarm was sounded at 9:27 a.m. to fight a fire which developed in a grain elevator made of corrugated iron and wood and which was being demolished by fifty workmen. Brisk northwest breezes fanned the flames into the proportions of a five-alarm blaze.

When the fire department arrived, the fire had involved the entire building. Luckily only four firemen were injured—none seriously.

Workmen on the roof heard the flames crackling beneath them. The fire escapes had been removed in the early stage of the wrecking process. Remembering that there was a painter's scaffold, the men made quick use of it. The platform descended to the ground with a load of the men and then returned for another load. All about the flames were scorching the ropes and it was merely a question as to whether the men would reach the ground before the ropes burned through. But the men won.

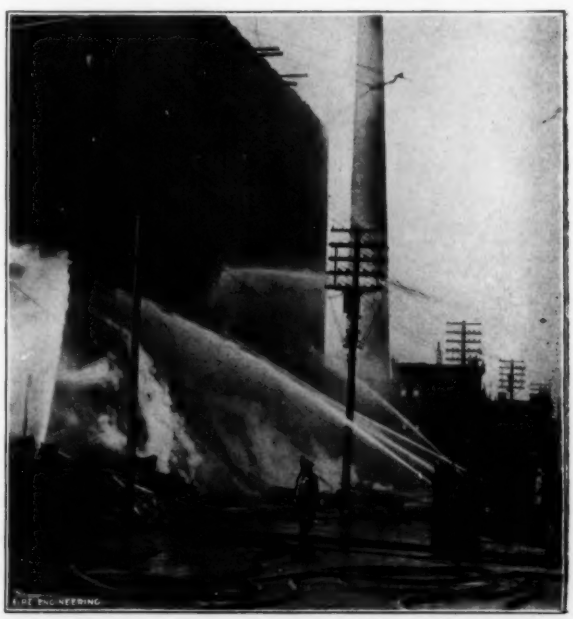
The corrugated iron melted easily in the intense heat of the fire. The heat from the flames cracked many windows in the nearby buildings; forty-one structures in the vicinity were painscorched, but the fire did not break out in any of these buildings. The rubberoid coverings on some of the roofs melted and ran down the side of the buildings like water.

Embers from the elevator set fire to a number of ties of the nearby tracks of the Pennsylvania Railroad. A switch engine plied back and forth sprinkling water on the ties of the eight tracks that passed by the elevator.

The five alarms called out nine chief officers, thirty-four company officers and 265 men. In addition there were fifteen American-LaFrance pumpers, five Seagrave pumpers, one Ahrens-Fox pumper; one Seagrave, two American-LaFrance and three Boyd aerial ladders; one Mack, one commercial truck and one American-LaFrance pipe wagon and an American-LaFrance rescue wagon.

There were many hydrants available and the average spacing between the hydrants was two hundred feet. Two high pressure streams were used and twenty-three other streams. The hydrants were supplied by a twelve-inch and twenty-inch main. Turrett pipes and play pipe outfits were used.

Ross B. Davis, chief of the fire department was in command at the fire. Two hours after the fire started only a few charred embers were left to mark the site of the grain elevator.



Men Marooned On the Roof of This Elevator Escaped Just Before One of the Walls Fell In

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Anaconda, Mont., Purchases Seagrave Pumper—A 750-gallon Seagrave pumper has been purchased by Anaconda, Mont.

Shelton, Wash., to Purchase Apparatus—Shelton, Wash., has invited bids for supplying the town with fire apparatus.

CHINESE BOMBARDMENT AND FIRE DESTROY 2,500 HOMES; MANY KILLED

An Account of the Chinese Political Trouble from the Perspective of a Fire Chief—Snipers Hamper Fire Protection

By J. GORDON DYSON
Chief of Fire Brigade, Shanghai, China

ON Sunday, March 20, matters became so tense in China with the routing of the Northern troops who had taken up positions about twenty miles from Shanghai that precautionary mobilization was ordered for the police and the fire department within the International Settlement limits.

At the time when general mobilization was ordered for the volunteers, rifle and machine gun fire became general in Chapei, the large Chinese settlement adjoining the International Settlement—a district with a population of 350,000 people. Cantonese soldiers in plain clothes, and about 4,500 members of the labor union who had been hiding within the city, attacked the police and Shantung soldiers by firing from windows and roofs of the houses.

Fire involved one of the police stations and this spread to forty houses. The Chinese fire department could not respond because of the street fighting, and the fire burned itself out by six o'clock in the evening. Northern troops of several thousand soldiers and one hundred White Russians manned an armored train which had been brought from the north at the North Railway station, and they made a stand about one hundred feet from the northern edge of the Settlement.

They started to shell with six pounders the various houses, where snipers were observed. A Cantonese club took fire then the fire station of No. 3 Division of the Chapei fire department, and then thirty houses around caught on fire. At 10:15 p. m., another fire broke out about one-quarter mile from the other one, and in addition two more fires were reported by men in the watch towers in different parts of the Chinese settlement. At 9 a. m., there were four distinct fires in different sections of Chapei, and all burned themselves out before they reached closer than one-quarter mile of the International Settlement.

When the fire neared the Settlement, the Settlement brigade turned out and worked under the protection of the Japanese sailors, although the sniping continued; luckily none of the firemen was hit.

In all about 2,500 houses in Chapei were destroyed, and many bodies were found. It will never be known whether they died from the military fire or by the flames. In normal times the Chapei department consisted of 120 men divided into four divisions. One German make pump and an American make tender was assigned to the first division. The second division had a French make pump and an American tender; the third division had an English make pump and an American tender while the fourth division had a French make pump.

Upper—Remains of a Leland Pump of the 3rd Division, and the Chapei Fire Station Destroyed by Fire. Lower—Ruins of Some of the Many Houses Razed by the Fires in the District

Norwich, N. Y., Grocery Warehouse Destroyed

Fire in a grocery warehouse in Norwich, N. Y., spread to the size of a two-alarm fire and caused a $75,000 damage. The cause of the fire is not known.

The warehouse was originally used as cold storage plant, and the construction of the structure hampered the work of the firemen. A sprinkler system of protection was being installed in the building and would have been completed in about a week's time, but the outbreak of the fire caused a $4,000 loss to the company installing the system.

There was a quantity of pitch in the building at the time of the fire. The pitch was being used in the installation of a refrigeration system, and this material added to the intensity of the flames.

Several firemen were injured in fighting the fire; one fell from the roof when a wall of the building collapsed. Four men suffered from injuries caused by flying glass. Chief L. C. Brookins and the members of the Norwich, N. Y., volunteer department were able to prevent the spread of the fire. Nearby was a grain elevator but the firemen were able to save it. The residents are loud in the praise of the manner in which the volunteer firemen fought the most serious fire in the history of the place.

Chief L. C. Brookins

Fire Destroys Cleveland Paint Plant

Static electricity was believed to be the cause of the fire which destroyed the Patterson-Sargent Co., plant in which paint and varnish was manufactured in Cleveland, Ohio. One workman was killed and three were injured.

A loose belt operating on a sixteen-inch shaft and close to the mixing vats is believed to have generated sufficient static electricity to throw off some sparks. A workman who entered to adjust the belt was killed.

About two seconds after the explosion that followed, workmen were running excitedly through the plant and shouting a danger warning. Shortly after the blast, the entire building was in flame. Inside of the plant there were twenty drums of lacquer and pyroxylin and these steel drums exploded—the head of one drum blew up through the roof and crashed down at the place where the fire apparatus was stationed. Large quantities of water were poured onto the building before the fire was believed to be under control.

Baltimore Retires Three Battalion Chiefs—The fire board of Baltimore, Md., has retired three battalion chiefs from active service. They are John R. Miller chief of the seventh battalion, William J. McDonald, chief of the eighth battalion, and Eugene Short, chief of the tenth battalion. The following captains have been promoted to the positions made vacant: George D. Otter, John F. Steadman and Hugh J. Lavery. There were subsequent promotions all the way down the ranks.

WHAT'S BURNING

THE following list includes fires of $25,000 loss and over in the United States and Canada, for the periods designated in the headings. These figures, compiled from telegraphic reports, are based on estimates made at the time, and are subject to later investigation and consequent revision. Taken as a whole, however, they give an approximately correct view of the losses incurred. The figures represent loss in thousands.

Week Ending May 6

NORRISTOWN, PA.—Bldg. of Neiman Hardware Co..... 40
CRESTON, IA.—Dalbey Apt. bldg. destroyed..... 25
ROCK VALLEY, IA.—Bldgs. on Corwin farm—north..... 50
STONINGTON, ILL.—Baptist Church destroyed..... 25
MADILL, OKLA.—McMillan Hardware Store damaged..... 70
MURRAY, KY.—Property of People's Loose Leaf Tobacco Co... 25
WESTERLY, R. I.—Town hall, court house and adj. property.. 200
WEST MIDDLETOWN, O.—Madison Township school bldg.... 65
GRANITEVILLE, S. I., N. Y.—Pavilion Hotel and adj. property 175
ALBANY, N. Y.—North Shaker Settlement Farm..... 80
NEW YORK, N. Y.—Bldgs. 240–248 West 145th St. damaged.. 40
BRIDGEPORT, CONN.—Henry Carstesan Garage bldg..... 125
TAUNTON, MASS.—Staples Coal Co. shed and adj. property.. 70
GASTONIA, N. C.—Mill and 3,000 bales of cotton..... 100
WILLIAMSPORT, PA. Bldg. of Williamsport Leather Co..... 250
MELROSE, MASS.—Eastman block damaged..... 80
RIVERSIDE, CALIF.—Plant of Cresmar Mfg. Co..... 100
ROCHESTER, N. Y.—Knorr Convalescent Home damaged..... 30
CAMDEN, N. J.—20 Coaches in Penna. R. R. yards..... 80
LAMAR, TEX.—Leyhe Piano Co. damaged..... 25
MILFORD, MASS.—Stone Furniture Co. & Adj. property..... 40
SHELLVILLE, CALIF.—Old Clements home destroyed..... 25
HOOPESTON, ILL.—Willingham Garage destroyed..... 35
DOUGLAS, MICH.—Weed, Garber & Wark Basket Co..... 800
RHINELANDER, WISC.—Plant of Wisconsin Veneer Co..... 125
PATERSON, N. J.—Warehouse, Ella Furniture Co..... 30
BROADALBIN, N. Y.—Several business bldgs. destroyed..... 50
GRAND RAPIDS, MICH.—Winegar Furniture Store damaged.. 30
BRIDENORTH, ONT.—Allen B. Mann farm bldgs. destroyed.. 25
CHICAGO, ILL.—Plant of Accessories Mfg. Co..... 40
ST. PAUL, MINN.—St. Paul Trunk & Bag Co. Plant..... 50
MILTON, N. H.—Ice house of Porter-Milton Co..... 80
SPRINGFIELD, MO.—Hardesty Bakery and adj. bldg..... 80
MEXICO, MO.—Grand Theatre and adj. property damaged.. 80
TYLER, TEX.—Three business bldgs. destroyed..... 60
CHIPPEWA FALLS, WISC.—Bldg. Jim Fall Butter & Cheese Co. 25
NORWALK, CONN.—Warehouse of Thames River Line..... 40
WATSONVILLE, CALIF.—Packing plants and residences.... 250
BALDWIN, L. I. N. Y.—Business establishments, Church St.... 30
HOBOKEN N. J.—Bldg. 1014 Clyinton St. damaged..... 80
GASTONIA N. C.—Warehouse of Gastonia Builder Corp..... 120
ULLIN, ILL.—Ullin Box Factory destroyed..... 40
SCOTT'S FERRY, FLA.—Walker-Jordan Lumber Co. plant.... 200
NEW HAVEN, CONN.—Shed in New Haven R. R. yards..... 80
WAYNESVILLE, IND.—Capitol Theatre and adj. property.... 80
ESSEX, MO.—Fox store destroyed..... 25
SANTA BARBARA, CALIF.—La Cumbra Country Club..... 50
ASTORIA, L. I., N. Y.—Bldgs. at North Beach destroyed..... 45

Week Ending May 13

ALBANY, N. Y.—Devine Hotel, Post Rd., damaged..... 25
AMERICUS, GA.—Warehouse of Commercial Storage Co..... 65
ROYERSFORD, PA.—Plant of Rogers & Co. destroyed..... 65
SPOKANE, WASH.—Bethel Presbyterian Church..... 35
WILDWOOD, FLA.—Humphries Bldg. damaged..... 30
WARWICK, R. I.—White House Country Club destroyed..... 25
STAR CITY, ARK.—Business establishments damaged..... 25
WEST HELENA, ARK.—Sheds and stock of Chicago Mill & Lumber Co..... 25
LAKE CORA, MICH.—Lake Cora Hotel destroyed..... 30
SPRINGFIELD, OHIO—Plant of Armstrong Mfg. Co..... 25
ROSLYN HEIGHTS, L. I., N. Y.—M. E. Church destroyed.... 50
PERRYSVILLE, OHIO—Business establishments destroyed.... 65
HARRISBURG, PA.—State printing plant destroyed.....1200
SPRINGFIELD, CT.—Farm property of J. H. Clune..... 25
ASBURY GROVE, MASS.—125 cottages destroyed..... 65
ELIZABETH, N. J.—Garage of A. G. Rothey destroyed..... 80
JERSEY CITY, N. J.—City garage..... 35
BROADALBIN, N. Y.—Post office and adj. property damaged.. 50
CHICAGO, ILL.—Plant, A. L. Randall Co., Auburn Park..... 60
MOORESTOWN, N. J.—H. H. Lippincott estate, Riverton Rd... 40
SHAMOKIN, PA.—Hollenbach & Raker Apt. bldg. damaged... 40
LOS ANGELES, CALIF.—R. H. Howell residence, W. 7th St... 45
ROADSTOWN, N. J.—Farm bldgs. of J. L. Bitters destroyed.. 50
OCTO, WISC.—Octo Armory and Schneider Hardware Co..... 80
HARTFORD, CONN.—Eastern League Baseball Park damaged.. 65
JOHNSVILLE, N. Y.—Jacksonville Presbyterian Church..... 30
FAYETTEVILLE, N. C.—Fayetteville Lumber Co. damaged... 30
KINSTON, N. C.—Main bldg. Medical College, Univ. of Ga.... 40
PETALUMA, CALIF.—Pataluma tannery damaged..... 50
READING, PA.—Property of C. H. Schlegel destroyed..... 30
JUNIUS, S. D.—Owen & Paulson Elevator Bldg..... 80
BLOOMINGTON, IND.—Plant of Bloomington Packing Co..... 40
CAYCE, KY.—Business establishments destroyed..... 25
BEATTYVILLE, KY.—Residences and stores damaged..... 25
CLEVELAND, OHIO.—Blossom Heath at Rocky River Lagoon 25
KIPAWA, QUE.—Property of Reardon & J. R. Booth..... 65
WAUSAU, WISC.—Wausau Lumber Company practically destroyed..... 100
WASHINGTON, D. C.—Thornton Courts, Takoma Park..... 40
LOS ANGELES, CAL.—Five factories and garage destroyed.... 140
ELLINGTON, CONN.—Sheds on Coggswell farm destroyed.... 25
GLOBE, ARIZ.—Residences in Noftsger Hill district..... 25
SAN FRANCISCO, CAL.—Apts. at Broderick and Hayes Sts.. 25
HUNTINGTON BEACH, CAL.—Derricks and tanks of Eastern and Standard Oil Cos..... 250
EUREKA, KANS.—Crebo Building damaged..... 80

CORRESPONDENCE

Fire in Park Row Building

To the Editor:

With all this talk about the fire in the structural work on the tower of the Hotel Netherland, in the course of construction, I recall a fire that took place in the Nassau Chambers Building on Nassau and Ann streets.

The Park Row Building was then in the course of erection, and flying embers from the Nassau Chambers Building set fire to the wooden structural work on the top of the Park Row Building.

It was no problem to the firemen of twenty-eight years ago to climb up with their hose and extinguish the fire. In those days, there were no standpipes or stairways, and the men climbed up ladders. The old steam engines furnished enough pressure to force the water up.

There was no fire college to teach the men how to climb. On the night of that fire there were two simultaneous calls for large fires—the Nassau street fire and a five-alarm fire on the Polo Grounds at 8th avenue and 155th street.

Maybe the firemen have changed—the old guard would have never hesitated to stretch in upon reaching a fire. The engineer of the steamer seemed to know where to place the apparatus to do the most good and how much pressure to maintain without computing friction losses or slip of the pumps. And this was done, usually without an officer in charge.

I am not talking against the value of a fire college but just to bring out that we did not have some of the modern tools that the present-day fireman has, and we put out fires effectively.

Yours truly,
MEMBER OF OLD NINE ENGINE.

Locating Fire Hydrants

To the Editor:

In the days when cities and towns erected tall unsightly standpipes about the streets, the water from these outlets were used to fill water wagons to sprinkle the streets and allay the dust.

Today these standpipes are of no use, as far as I can see, and besides they are unsightly standing near the curbstone.

From a fireman's standpoint, don't you think that such standpipes should be removed and replaced by fire hydrants? City officials have often gazed up and down streets looking for a desirable place to spot a hydrant without considering such possible sites.

The standpipes have the water shut off and are useless in case of fire while a hydrant furnishes some protection to the community.

Yours truly,
HARDEE G. V. DAY,
Malden, Mass.

Dorr Co. Mill and Laboratory Burned

Fire recently destroyed the laboratory and mill of the Dorr Company on the banks of the Saugatuck River at Westport, Conn.

The mill dates back to Revolutionary times when it was originally used as a cotton mill. When cotton spinning became less active, the place was converted into a grist mill to grind buckwheat flour. As soon as this industry became inactive, the mill and thirty-five acres of land were purchased by the Dorr Company. It is planned to rebuild the mill immediately.

Bronze Powder Wrecks Plant

Explosions from bronze powder dust wrecked the plant of the Ohio Bronze Powder Company in Cleveland, Ohio. Windows in the surrounding homes and factories were shattered by the fifteen intense blasts which occurred. One plant lost more than one thousand panes of glass.

One fireman was hurt, but not seriously, when the force of an explosion hurled him against a column.

Shenandoah, Pa., to Purchase Two Pumpers—Bids are to be invited for furnishing two triple combination pumpers for Shenandoah, Pa. A committee is working on plans to finance the purchase.

Tecumseh, Mich., to Purchase Apparatus—Members of the Tecumseh, Mich., council have made trips to nearby cities to inspect fire apparatus in order to form an opinion of the type of apparatus to purchase.

COURSE OF INSTRUCTION IN FIRE PROTECTION

AS GIVEN AT THE UNIVERSITY OF ILLINOIS

WATERWORKS AND PIPING

By CLARENCE GOLDSMITH

Assistant Chief Engineer, National Board of Fire Underwriters, Chicago, Ill.

IN this thirty-fifth installment of the University of Illinois Course in Fire Prevention, Mr. Goldsmith gives some important hints as to the cooperation between the fire and water departments, and the maintenance of hydrants and valves:

Should Carry Independent Gates

We always believe it is desirable where we have two-outlet hydrants for the firemen to carry independent gates and put one gate on each outlet. One gate should be carried on the hose line, and the other gate tied with a strap to the first gate so that those two gates can be readily available to put on the hydrant. In case you want to lay in a second line, you can lay it in without shutting the hydrant down. Where you have a relatively low pressure, thirty or forty pounds, you may start out and think you can catch that fire without a large line, but if the fire gets away, you can drop your chemical line, come back, and put your pumper on the gated outlet and then the only delay you have in delivering water is to shut down the gate valve on the hose line and shift the line over to the pump, which will not take cover a half a minute.

The question of putting gates on the hydrants is discussed; sometimes they tell me that it takes too much time. Stop and analyze it. Why should we economize in a place that does not do any particular good? In most fires the hydrant man can get off, take the two caps off, and put the gate on the hose line and get his hydrant open before they are ready for water at the other end of the line. If it is some old woodshed at the back of a house, and you have no entrance to make, you might have to wait two or three seconds for your hydrant man. This question of the time required is unimportant as you will find if you analyze the maneuver.

Does Not Believe in Utility of the Soft Suction

Along the same line, we do not believe that the soft suction is a desirable thing to use on pumpers. If it is carried on the pumper at all, you are going to use it, as it is a little easier from the manual standpoint to put the soft suction on. Even in the larger cities we are liable to get a fire where we have to concentrate large quantities of water and pull the pressure down on the mains to zero or below, and then the soft suction will collapse. In outlying districts you are liable to get on dead ends where you will pull the pressure down to zero. There are very few times when the operator, if the work of the company is properly allocated, cannot get the stiff suction on the hydrant, without loss of time, and then he can suck the water out of the mains as long as there is any to suck out. So stick to the hard suction because that is not, as I say, a governing feature for determining the time.

In our inspections we run every engine company out of its house, let it take the nearest hydrant, take of the hydrant caps, put on the hard suction, lay 200 feet of hose, attach a nozzle, and raise the pressure to 100 pounds on the pump, and any company that is well trained can do this in just about sixty seconds. So you are not losing very much time and you would not save any time if you did not have to make your connection to the hydrant with a hard suction.

Try to Cut Down Time of Operations

Analyze all fire department maneuvers in this way and find what is the particular portion of the maneuver taking the longest time, then see if you can divide up your men differently so as to cut down the time. We know this can be done from the records of city departments. The city of Milwaukee has a board of six engineers review their standard maneuvers and change them from year to year, so the time may be cut down.

Some man in the company or some captain or some officer finds a little easier way to do some particular thing. We can perform all these fire department maneuvers with a minimum amount of exertion if we pay attention and study them.

Firemen Must Know Capacity of Water System

There is one thing that is very important for the fireman to remember, because the fireman is in supreme command at the time of a fire, he is boss of everything, and that is the capacity of the water system from which water is being drawn. I don't know that this particular subject was ever more forcibly broughth to one's attention than it was about ten years ago at Coney Island, when a sweeping fire occurred. They had a separate fire main system of a capacity of some 4,000 or 5,000 gallons. The capacity, however, is immaterial, for they put on hose lines to take about twice the capacity of the system. The result was there was no stream from that system that was of any effect at all, they were all so weak. It is better to have one good stream than two poor streams, or two good streams than four poor streams. The onlooker may see the water coming ut the nozzle, but it is not putting the fire out, so don't try to overload your system.

You can determine, or correctly find out, what the capacity of your system is in the mercantile district, where the greatest values are. Today, the Illinois Inspection Bureau classifies the protection in all protected towns in the state, and in the course of that classification, they measure the water they can get out of the hydrants. The engineer who is doing that work secures his information from the members of the fire department and the water department. In your town if they find that they can get 750 gallons at sixty pounds pressure, if that's the pressure you need, don't try to use more than three one and one-eighth inch streams. If you do, you will draw the pressure in the mains down and not get the powerful streams you may need.

You may have a four inch dead end and you can get one good one-inch stream, but don't try to get two streams.

I used to run with a volunteer department about thirty years ago, and we used to borrow horses from a close-by machine shop. We had a fire one night and had to run up a long hill. One of the fellows named Steve said, "Boys, put on two collars on those horses, that's a steep hill." You are going to do as much good trying to get two streams where there is not pressure enough to supply them as Steve did by putting two collars on the horses. It will not work.

(To be continued)

Chief Kennedy Presented With Badge

Chief John B. Kennedy of the Augusta, Ga., Fire Department was presented recently with a solid gold badge as a token of love and esteem from members of his department, and the Civil Service Commission.

The presentation was made in the presence of the entire personel of the Fire Department and the Civil Service Commission at Fire Headquarters. An order was issued by the Civil Service Commission to the chief, that all firemen with their apparatus from the seven stations in the city be assembled at Headquarters. The chief did not know the purpose, but carried out the orders from his superiors. Promptly at 5:30 p.m. all apparatus from the various stations was parked in front of Headquarters.

The presentation speech lauded the efforts of the present chief to make of the Augusta Fire Department, one of the best and finest in the country. JOHN A. STULB.

Dismissed for Salvage Work in Wine Cellar

Report from Solihull, England, relates that a captain and a lieutenant of the fire department of that place, were recently dismissed for cause. The cause consisted in the two officers entering the wine cellar of Lady Reynolds, where they became intoxicated—so much so that one of them fell off the apparatus on the return journey. The fire which they had been called to extinguish, while in the same building, did not make it necessary for them to enter the wine cellar. Lady Reynolds made this plain by issuing a statement saying that she did not ask the firemen to "salvage the contents of the wine cellar." The high officials of the department have assured the public that it "may have every confidence in the brigade in the future."

Riverside, Cal., Trained in First Aid—The firemen in Riverside, Cal., are being trained in first aid work.

FREQUENT DRILLS NECESSARY TO HAVE MEN WELL TRAINED

Drill Tower Work of Value in Training—Men Should Be Taught Why Standardized Drills Are Used—Must Know Their Tools

By J. H. CARLISLE
Chief of Fire Department, Vancouver, B. C.*

FOR properly trained firemen, the men should be taught to have confidence in their tools, in their comrades and officers, and they should be so drilled that they will function as one unit. This information can not be gained in the heat and hurry of fighting a fire but must be learned in a drill school. Lessons in first aid should also be given.

All paid departments should be equipped with a drill tower at least four stories high, and so built that ladder work may be carried on with ease. It should have an interior stair way with a well, iron ladders, fire escapes, smoke chamber and sprinklers. This enables one to acquire practice in the use of both the pompier and straight ladder, rope work, and facility in hose evolutions, while the smoke chamber is used to properly train the men in the use of smoke helmets and respirators under actual working conditions.

In Vancouver we have a drill tower one hundred feet high. Twice a week the day platoon are drilled at this tower, weather permitting. In addition the platoon is drilled once a week on buildings in the company's district. The latter plan enables both the officers and men to become familiar with the buildings in their district, and the hazards that they are likely to encounter.

Drills to be effective must be standardized and the men must be taught the reasons for each evolution so that they may know just why they are asked to do each test. It is all very well to show a man how a building may be ventilated but to allow this lesson to stop at that without a full and proper explanation of the reason for ventilating would make such training useless. Without the proper knowledge, the men would probably do more damage. Not only does this apply to ventilating, but to other workings in the service.

The men should become familiar with the use of the smaller tools such as door-forcers, bars, battering rams, life guns and so forth, even though some of the tools are not used very often.

Competition should be encouraged but care should be exercised so that in the zeal to better some time record, the men do not transgress from the bounds of safety. Competitive drills prevents the men from becoming stale and takes the drills out of the class of mere routine work.

A good method to use in training the men is to take one man from a company to a building, describe a mythical fire then give him full charge of the company. Let him place the apparatus and men as he sees fit. When he has covered all the points, call the men together and describe the fire to them. Ask them if they have discovered any errors in the way their company-member fought the fire, and their reasons for thinking so. Another way of testing the information gained by the men is to hold written examinations.

The firemen should be trained in the rudiments of public and private fire alarm systems, sprinklers, oil burning equipment, motors, elevators, switchboards and so forth.

If each of the men receive a proper course of instruction, the officers, when at a fire, will not have to bother with the many details as the men will be trained to meet the many emergencies that may arise.

* Abstract of paper read at convention of Pacific Coast Fire Chiefs' Association.

Compton, Cal., Firemen Ask for Increase—It is probable that the voters in Compton, Cal., will vote in June on the proposition to increase the pay of the firemen. Petitions asking for the increase have already been filed.

Ora Vista, Cal., Organizes Fire Department—Ora Vista, Cal., and another community have organized the South Side Fire Department. The purchase of a siren has already been authorized.

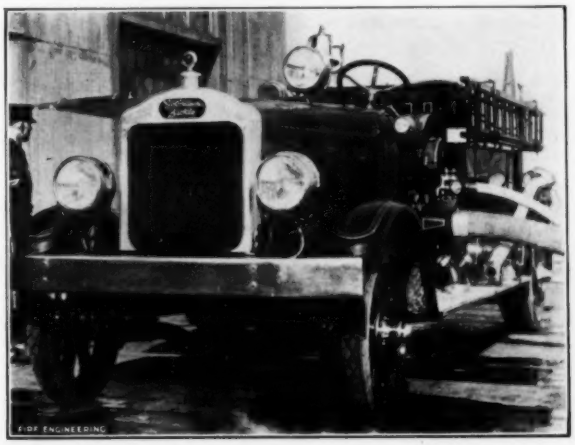
Haggerty, Acting Chief of Berkeley, Cal.—George Haggerty, deputy fire chief of Berkeley, Cal., has been named acting chief of the department to fill the vacancy caused by the death of Chief Sydney Rose. Haggerty became deputy chief when Rose was made head of the department.

Sacramento Firemen Ask for Increase—The firemen of Sacramento, Cal., have petitioned for an increase in their pay. No specified amount of increase has been asked. According to the firemen, members of Sacramento are paid below the standards of other nearby cities.

New Type Engine Tested at Toronto

Five Gotfredson-Bickle fire engines, a new type of fire apparatus being manufactured in Walkerville, Ont., were tested under the direction of Prof. R. W. Angus of the University of Toronto for the city of Toronto.

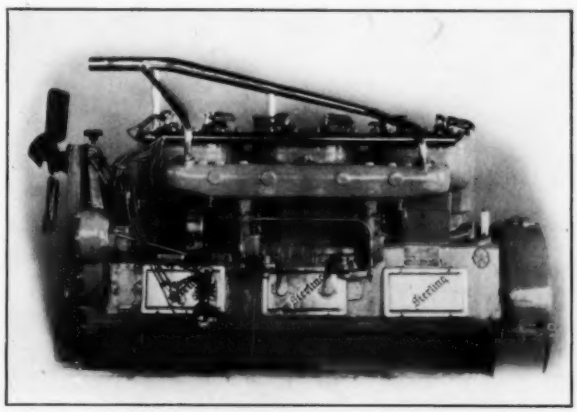
Each machine is guaranteed to deliver 800 Imperial gallons a minute at a pressure of 120 pounds a square inch. This is a larger unit than the United States gallon and one U. S. gallon



Gotfredson-Bickle Pumper at Dock for Test

is equal to .832 Imperial gallons. The pumper, according to U. S. standards, has a capacity of 960 gallons. It is designed to operate at a speed of 1,300 r.p.m., although it has a perfect range of speed up to 2,000 r.p.m.

The apparatus is operated by a six-cylinder Sterling motor with a 5½-inch bore and a 6¾-inch stroke. The cylinders are



Sterling Motor Installed in Gotfredson-Bickle Pumpers

of the T-type with the combustion space over the valves and not over the piston. The crankshaft is drop forged chrome nickel steel. The apparatus ran free from excessive vibration during the test.

Milton, W. Va., Erects New Fire Station—A new fire station is being erected in Milton, W. Va.

Miami, Fla., Opens New Fire Station—Station 5 in Miami, Fla., was officially placed in service under Capt. A. M. Willis and a compliment of ten men. At the present time, the city has nine fire stations.

A New Battery-Operated Siren—After a great deal of experimentation, a siren has been developed and marketed by the B. & M. Siren Manufacturing Company which it is claimed uses considerably less current than the present types of battery sirens. It has the same carrying tone as a mechanical siren, and it can be heard for a great distance through heavy traffic.

BUILDING OFFICIALS CONFER IN CHICAGO ON FIRE SAFETY

Methods of Underwriters' Fire-Resisting Ratings Described—Copies of New Chimney Construction Ordinance Distributed

THE close work of the building commissioner and fire marshall was given tangible recognition at the thirteenth annual meeting of the Building Officials' Conference of America, which was held in Chicago, April 25 to 29.

In order that the delegates might secure an intimate knowledge of the fire problem, and of what it means to them, A. R. Small, vice president of the Underwriters' Laboratories, and the late Ira H. Woolson, consulting engineer for the National Board of Fire Underwriters, addressed the gathering.

Mr. Small devoted the major part of his talk to a description of the work done by the Underwriters' Laboratories, and the methods by which this organization is giving building materials definite fire-resisting ratings. Walls, columns and partitions can now be tested under load. With the information acquired through tests of this type, a definite step is made toward developing a procedure for giving buildings definite fire ratings that will be based entirely upon scientific research.

Tests on hollow concrete units under load have already been made. The results, according to Mr. Small, prove that these units are "substantial, worthwhile and worthy fire retarders, which can bear loads under fire."

This work is being carried still further by tests made in the field. Many manufacturers of concrete products have already subscribed for the Underwriters' inspection and label service, and the number is constantly increasing. The concrete units manufactured in a given territory are tested and reports are made on them. With this data available, the building official can make definite recommendations to the city council on tangible ways in which to reduce the fire hazard.

Work of National Board Explained

Mr. Woolson called attention to the work of the National Board of Fire Underwriters in bringing about standardization in building codes. It distributes model codes and ordinances to those who may be interested in better construction. Many copies go to engineering colleges.

Copies of a revised and newly published ordinance for chimney construction were distributed to the delegates. This ordinance provides that the chimney walls be lined with flue lining and built of brick, concrete, stone, hollow tile of clay or of concrete, or of concrete block. A metal smokestack is permitted when it is located inside a vent shaft having masonry walls at least eight inches thick, provided there is an air space between the stack and the walls.

Masonry or concrete walls may form part of the chimney if the walls of the chimney are securely bonded into the wall of the building.

Flue Linings to Be Used

Flue linings are to be manufactured either from fire clay or from some other suitable refractory clay. They are to be imbedded in a mortar made from one part of portland cement to not more than three parts of clean sand.

Some points of specific interest to those engaged in fire fighting were brought out by Frank Burton, of Detroit, former president of the Conference. Mr. Burton, in discussing the preliminary draft of the model building code for Pacific Coast cities, called attention to the fact that frame construction is permitted for comparatively great heights in school houses and similar structures. He then spoke on the necessity of structural fire safety in buildings of this type.

Value of Concrete Garages

He also discussed the value of concrete construction in buildings such as garages, where intense heat will result if a fire develops. "Concrete has a high heat capacity", he said. "As it absorbs heat rapidly and has a comparatively low surface heat, fire fighters can work more effectively in a concrete building which encloses a fire than they can in a building whose walls hold a high surface heat. The power of absorption inherent in the material also tends to keep the interior cool, and consequently helps to prevent much of the destruction resulting from high temperatures."

First Fire Test Made in 1896

A general outline of standard fire tests was given by Wharton Clay, of the Associated Metal Lath Manufacturers. He stressed the importance of definite standards, spoke on the work done in Europe, and described a part of the work done by the British Fire Prevention Committee.

Apparently the first practical fire test made on full size units of fire resistive construction in America was conducted in Brooklyn in 1896, according to Mr. Clay. In 1895 tests were conducted in New York City under the supervision of the Bureau of Buildings of which Rudolph P. Miller was chief engineer. Mr. Miller, now in consulting work, was a delegate at this conference.

A short time later, the late Mr. Woolson, who was then a professor at Columbia University, established a testing station for study of the fire resisting qualities of various materials.

The tests now being made include studies of such phenomena as heat transference, hose pressure, and action under load, as well as fire resistance. The variety of observations made, coupled with the rigid control of the conditions under which they are made, makes the findings valuable from both a scientific and a practical viewpoint. In discussing this matter, Mr. Clay said:

"It takes about eight men to handle a fire test at the Underwriters' Laboratories, to make all the observations required by the Standard Test, and this is under ideal conditions in a building specially designed to accommodate such a test. It is, therefore, understandable why a "back yard" test or a comparative test of two materials made in a hut with a bonfire exposure is not reliable as to its time rating, and because of the various conditions of draft and irregularities of fire it is not even reliable as a comparative test.

"Consequently, the materials surviving the Standard Test may be considered as suitable for the structural integrity of buildings under conditions of severe fire exposure."

Guests of Portland Cement Association

Besides hearing discussions on fire resistance in buildings, the officials attending visited a building erected entirely of fireproof materials and saw a fire test performed. The delegates were guests of the Portland Cement Association on Wednesday, April 27, and inspected the Association building, which is structurally entirely of concrete. Following a luncheon in the Association Research Laboratory, the delegates went to the Underwriters' Laboratories, where they witnessed a fire test made on a metal door.

Prof. Ira H. Woolson Dead From Stroke

Prof. Ira H. Woolson, known throughout the country for his work in improving the building codes of the numerous municipalities, and for his books on building construction and protection, died on Sunday, May 8, at Chicago from an apopletic stroke.

For the past seventeen years, he had been consulting engineer for the committee on Construction of Buildings of the National Board of Fire Underwriters. Previously he had been adjunct professor of civil engineering at Columbia University. Herbert Hoover, Secretary of Commerce, had appointed him chairman of the building code committee of the Department of Commerce.

Professor Woolson was born on August 11, 1856, in Niagara County, N. Y. He graduated from the Columbia School of Mines in 1885. After serving on the New Jersey Geological Survey for two years he returned to Columbia as assistant in drawing.

In 1891 he became official testing engineer for fireproof materials in the university, and in the same year established the laboratories for that work. He remained at Columbia until 1910, when he was named official investigator of building materials for New York City. He had made the tests for fire resistance of structural materials for the city ever since then.

During 1910 he was named by the National Board of Fire Underwriters as its consulting engineer. In 1918 he served as a consulting engineer with the War Industries Board.

On invitation of Governor Alfred E. Smith, of New York, Professor Woolson made a survey with the state architect of all the State hospitals, and for this work received warm commendations.

For many years he was a member of the American Society of Mechanical Engineers and of the American Society for Testing Materials. In the latter society he was Chairman of many committees

Professor Woolson wrote much on building codes, his works being standard all over the country. He was the author of "Recommended Building Code," "Standard Ordinance for Chimney Construction," "Code of Suggestions for Construction and Fire Protection of Dwelling Houses" and "Code of Suggested Ordinances for Small Municipalities."

Mrs. Woolson, his wife, was with him when he died. Funeral services were held Thursday afternoon, May 12, in St. Paul's Chapel, Columbia University.

Ocala, Fla., Receives New Apparatus—A new piece of fire apparatus has been delivered to Ocala, Fla.

OF INTEREST TO VOLUNTEER FIRE DEPARTMENTS

Pride and Property

Firemen are merely human agencies for saving life and property. In this work, they are assisted by such mechanical means as fire apparatus and equipment. When the tools available for the firemen's duties are inadequate for the work, means must be found for augmenting the array of appliances for saving life and reducing the destruction to property.

In one of the smaller cities in the east, fire assumed dangerous proportions in the business section. Building construction was such that there was very little resistance to the spread of fire. At the time the fire occurred, only one pumper was available and six hose lines were stretched to strategic points about the fire. Frame construction and a painter's store room added to the dangers.

Assistance could be readily obtained from neighboring cities, as the municipalities in the district did not have any regulations concerning the prohibiting of response of apparatus to out-of-town calls. Another pumper was desirable. Suggestions were made to send in a call for assistance to the next town, but the heads of the department let their pride get the better of them.

"How would it look for us who have two large size pumpers, and a well organized department to ask for aid from a smaller place?" said one to another.

With no regard for pride and some of the finer things in life, the fire continued to blaze merrily, and before the fire was under control, the property destruction included a factory, seven stores, several apartments, and one man lost his life.

That the loss of life could have been saved by extra companies, is problematical. That the property damage could have been reduced is subject to debate—but in any event additional protection could have done no harm.

The manner of fighting the fire with the facilities provided can not be criticized; the manner of fighting the fire, with the means *available* but not called is both regrettable and far from being a credit to the honor of the service.

Pumps and all mechanical devices are tempermental tools. Trouble may develop at the most embarrasing time. If the pumper had stopped operating at this fire while the flames were spreading from building to building, a disastrous conflagration would have developed before additional assistance could have been obtained.

The fire department officers would do well to consider their second line of defense. Then, if any trouble does develop, other fire-fighting means are available. Too much dependance can not be placed on one unit. In the larger fire departments, where every known device to increase the efficiency of the fire service is available, apparatus have often developed mechanical troubles just when the most dependance was placed on them.

What a poor return on the confidence placed in a fire department to have pride stand in the way of efficiency! In Massachusetts and elsewhere associations have been formed so that aid could be rushed from one city to another whenever a large fire developed. Fire chiefs know that the keystone of successful department operation is based on the principle of cooperation. It is the "big" chief who knows when a problem is too large for him to handle alone.

Personal emotions have no place in a fire department at a time when life and property are at stake. Departments are organized for protection. To permit such petty things as pride to creep in, is to cheat the taxpayers who help support the department, and the business men who contribute towards the personal welfare and the entertainment of the firemen. Without the support of either of the two factions, a volunteer fire department can not function properly. It is only by prompt and efficient operation that the confidence of such groups can be secured and maintained.

Liability of Volunteer Firemen

A volunteer fire department would do well to consider the matter of compensation in case of injury to firemen. It has been pointed out that a municipality is liable as an employer under the workmen's compensation law, and while the municipality is not required by law to carry workmen's compensation insurance, it would be well to do so.

Under the laws of Minnesota, should such a policy be taken out, it must cover every member of the city government. That is, the policy could not be taken out to cover the fire chief or the firemen but it must cover every one employed by the city.

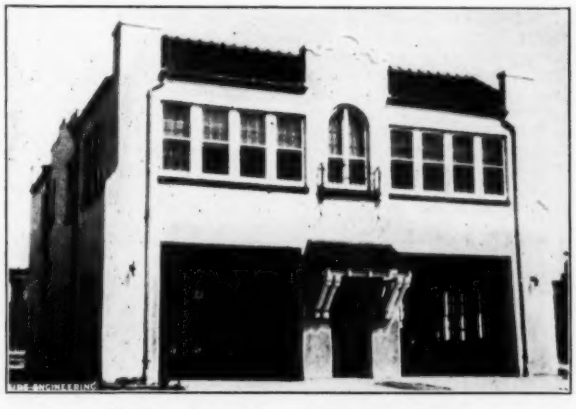
The Industrial Commission has held that members of a volunteer fire department, who are not paid for their services in such department, may collect in case of disability on the wages received from all sources. In other words, if John Smith is employed by the garage at so much per hour or so much per day or month and suffers an injury in connection with his work as a volunteer fireman, his compensation would be paid on the basis of the wages he received in his usual occupation. In the case of business men and professional men who are not on the wage basis, there can be no compensation payment at all, as all compensation payments are made on the basis of wages. The Industrial Commission strongly recommends that members of volunteer fire departments be paid by the municipality for their services in fighting fires. The department should consist only of members who do active work. An hourly rate of seventy-five cents when computed on the basis of eight hours per day and five and one-half days per week permits the payment to injured firemen of the maximum compensation permitted by statute.

Women Organize Fire Company

Greece is also located on this side of the Atlantic. It is a town in New York just outside of Rochester. Like the Greece of old, the women took an active interest in municipal affairs. In this instance, they were an active factor in the organization of a fire company known as the Barnard Fire Department for the Barnard community.

A number of the women organized, originally, a parent-teachers association, and they were successful in sponsoring amateur dramatics.

At one of the meetings, the subject of fire protection was brought up. With the exception of a discarded piece of apparatus from Rochester, the community is without fire protection. The result has been the organization of a fire company, and the new organization has been incorporated.



Minden, La., Opens New Fire Station

An attractive fire station has been opened in Minden, La. It is both artistically designed and equipped with conveniences for the firemen. In addition to the station, Minden recently placed a new fire alarm system in service. Boxes control the operation of the signals sounded by a fire whistle at a local factory. The fire alarm system was installed by the Gamewell Company.

Atlanta, Ga., to Have New Station—Contracts have been awarded for the construction of a fire station in Atlanta, Ga., which will be built at a cost of $18,000.

Amarillo, Tex., Trained by Oklahoma—Deputy Chief John Lynn of Oklahoma City, Okla., has been loaned to Amarillo, Tex., to act as drill master and train the fire department there.

Sioux City, Ia., to Have New Station—A new fire station, probably of the bungalow type, will be erected in Sioux City, Ia.

FIRE ALARM PUBLICITY NECESSARY TO CHANGE BAD HABITS OF PUBLIC

Chief R. J. Scott Plans Campaign to Alleviate Trouble—Many Do Not Know How to Direct Firemen to Location of Fire

By EDWARD W. WELTY
Captain Los Angeles, Cal., Fire Department

DING-A-LING-A-LING, rang the telephone at Engine Co. 42. Taking down the receiver, I heard a voice say: "Captain Welty, report at Chief Scott's office at 2 p. m."

I polished up my shoes and shined the bright-work, and at the hour designated I was to the outer door of Chief R. J. Scott's office. His secretary bade me enter, and I did, wondering what it was all about.

"Have a seat, Captain," spoke the Big Boss, and I found myself opposite a man who seemed to have more business lying on the desk before him than I could imagine one person taking care of. There was a stack of letters opened for his perusal that would have tickled the fancy of any movie queen.

I must have sat there for two or three minutes without a word being spoken. All the while I was speculating as to whether I was "on the carpet," and at the same time I tried to figure out what "boner" I had pulled.

The man opposite me was as quite in manner as any I had called on in many a day, and when he started speaking that same composure prevailed.

"Captain, I have called you in to talk over a contemplated program with you. In our daily work we find that a large percentage of the public is helpless when it comes to calling the fire department to report a fire. Over half of our calls are received incorrectly, and, as a result, we spend considerable time locating the fire we know is burning. When we do arrive at such fires we are roundly 'razed' and told that was have a Hickville department. We also find too many people taking it for granted that a fire has been reported, and while they watch the building being consumed by fire, they indulge in a lot of ridicule because our men are slow in responding. Another difficulty we are experiencing, is the failure on the part of those 'phoning in a report to designate whether it is north, south, east, or west, as the case may be. Then again, we have calls come in where they fail to state whether it is street, drive, place, or avenue, and we are at a loss to know where the fire is. Most women send in their call something like this: 'Bring the Fire Department; my house is on fire! I live in the house next to the church on Wilton!' And then up goes the receiver.

"Now, there is another message we have to get over to the public, and that is the carelessness with gasoline and benzine, and more particularly as these elements are used in cleaning garments about the premises. During the past year 616 persons were treated at the Receiving Hospital for burns, and a great percentage of these cases were due to carelessness in the use of these volatiles. We are going to ask every person to banish them from their premises altogether, as they are far more dangerous than dynamite. A person will throw seventeen kinds of fits when he discovers a stick of dynamite around, and yet they maintain and use gasoline as if it were harmless. There is no comparison as to the safety of these two products, as we all know that vaporized gasoline has far more explosive possibilities than dynamite. Now, in this campaign we will have a class of a million and a half to educate, and it is going to be a big job. We have raised the efficiency of our department to a very high level, and, in addition, our equipment is of the highest type. Yet, no matter how well equipped, the department can not properly function if the public is ignorant of the proper manner of transmitting an alarm. All the chief officers of the department are in accord with the plan of educating the public in respect to their relations with the Fire Department and their civic duties in fire emergencies. We are going to delegate to you the task of carrying on this educational work under the Bureau of Public Relations, and I will assign as many men to assist you as are necessary."

That was the beginning made by Chief Scott, one of the many fire chiefs in the country who is alert to function as a man in command of a fire department should. This seems to be a very interesting plan, and one that other cities would do well to follow.

Augusta, Ga., Accepts New Ahrens-Fox Pumper

A 800-gallon Ahrens-Fox pumper successfully passed the Underwriters' tests in Augusta, Ga. This pumper was purchased to replace an old Webb combination apparatus that had been in service for fifteen years. The test was made at the Augusta canal opposite Station No. 2. Standing in front of the machine from left to right are Chief John B. Kennedy of Augusta, Ga., Capt. John A. Stulb, correspondent for FIRE ENGINEERING and Capt. B. C. Hoy of Engine Co. No. 5.

JOHN A. STULB.

Chemicals Endanger Foodstuffs

Children are no connoisseurs of quality. They can not differentiate between fresh candy or that spoiled by chemicals used in fire-fighting. From a survey conducted by a medical association, it was learned that three children were made sick after eating such candy.

The medical association is alive to the problem and the following article has appeared in the *American Journal of Public Health*. The matter has been turned over to the Underwriters' Laboratories for further investigation.

Danger to Foodstuffs from Fire Chemicals

During the past two years, three children and one adult have been made seriously ill from eating food or candy which had been wet with chemicals used by the fire department at fires in foodshops. In each case the physician's diagnosis indicated poisoning by sulphuric acid. These cases were responsible for an investigation covering the past six months and although pathological determinations will be made when opportunity offers, the results chemically, clearly indicate thus far, a greater danger to the public than is generally recognized by health officials.

The ordinary fire extinguisher has sulphuric acid as the active ingredient. The chemical reactions within the extinguisher yield sodium sulphate plus water plus carbon dioxide gas.

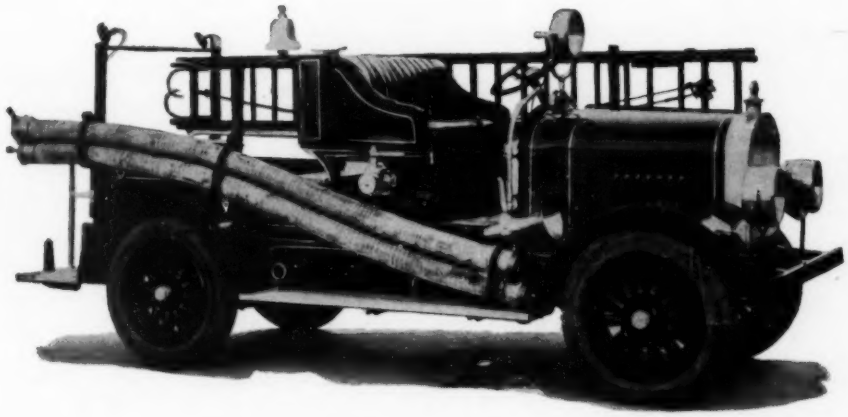
From the above reaction, it is apparent that the gas formed forces out the liquid containing glauber salt and water. The reaction should yield a neutral solution of glauber salt plus the carbonic gas. From our observations upon material that had been sprayed with the chemical solution, it was apparent that some free sulphuric acid had not been neutralized by the soda. This was determined by the ordinary methods used for the detection of free sulphuric acid, namely, drying of the matter material upon a water bath. The drying upon a water bath caused concentration of the acid until it attacked the organic matter present, causing a charring of the material. This test proved without question that free sulphuric acid was present. A test for combined sulphuric acid was then made, using a barium chloride test solution. This test was also positive showing the presence of sulphuric acid as the sulphate which of course should be present.

Recently a fire caused considerable damage in a store adjoining a candy store and several lots of candy became soaked with chemical solution. Samples of the several lots were taken and dried carefully so as to prevent charring due to heat, and four of the five lots showed the presence of free sulphuric acid. One might reason that if free sulphuric acid is sprayed with the salt solution that it would destroy everything with which it comes in contact. The answer is that the excess of water used to fight fires so dilutes it that it weakens or lessens its corrosive action. However, if the material that is soaked with the solution is dried, carefully using heat, the presence of the acid is easily found.

In view of our findings we have felt justified in condemning all foodstuffs for edible purposes following fires at food shops where chemicals were used. It seems pertinent, therefore, that health and food officials give this matter more serious consideration.

The above article was prepared for the *Public Health Journal* by W. E. Ward, of the Brookline, Mass., Board of Health.

Creston, Ia., Loses Apparatus—The pumper which was purchased by Creston, Ia., several months ago for $10,250 has been taken back by the apparatus concern in default of payment. The new administration refused to recognize the obligation of the old officials.



The Waterous Wins in Japan

Not long ago the City of Osaki, near Tokyo, was in the market for a new pumper. A competitive test of seven different pumpers was run; the Waterous made the best showing and was purchased.

For an all-around smooth-running, efficient and dependable fire pump, the Waterous has no equal.

Before you prepare specifications for your new fire apparatus ask us for descriptive matter.

WATEROUS FIRE ENGINE WORKS
INCORPORATED

Saint Paul, Minnesota

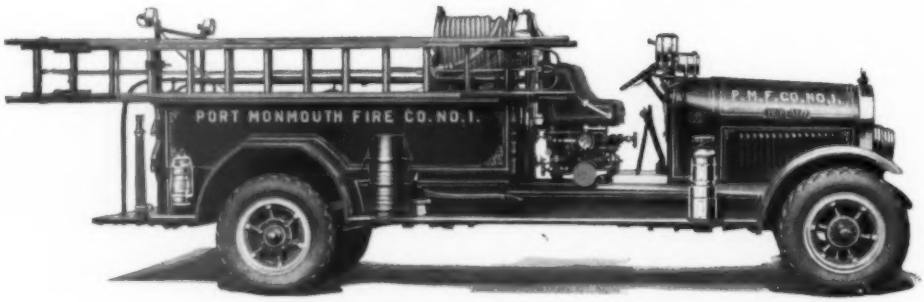
Also Manufacturers of the "Waterous" Fire Hydrant

Agents in Principal Cities

Established 1886

Waterous
Dependable

Buffalo Type 50



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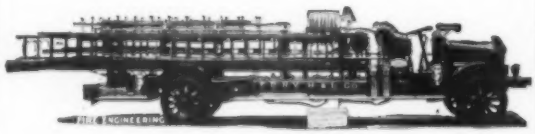
Light and Heavy



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Hook & Ladder Apparatus

We build any type of Apparatus required and can furnish High Grade Ladders in either Trussed or Solid Side types. Each Ladder is carefully made, ironed, and equipped for safety, strength and service.

Up-to-date FIRE FIGHTING APPLIANCES.

Write us when interested.

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The New Way to Fight Fires

WHY take a chance? This new Barton Pump equipped with automatic primer increases the effectiveness of your apparatus 100%. Merely mount on front of Ford, Dodge, Reo, or any make of truck, and engine supplies power through patented take-off. Throws stream over four story building as shown. Handles water containing sand, even small pebbles. Usually saves its small cost on first fire you attend.

Throwing 270 gallons per minute over four-story building.

Cost Surprisingly Low —Write for Details

You need this real protection — and you will be amazed that a fool-proof pump can be secured for so little money. Send for the facts today— no obligation.

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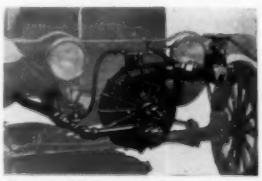
BATTLE CREEK, MICH.



Barton Pump ready for service on front of Ford truck.

BARTON
Portable Fire Pumps

Bookings of "The Fire Brigade" Increase

(*Continued from page* 486)

Michigan		
Coldwater	Tibetts	July 21–22
Detroit	Universal	May 22 (changed from June 3)
Halfway	Halfway	June 29–30
Manistee	Lyric	June 14–15
Maple Rapids	Elmac	July 31–August 1
Marlette	Liberty	July 8–9
St. Charles	Lyric	September 5–6
Mississippi		
New Albany	Dreamland	August 10–11
Missouri		
Brunswick	Russell	July 4–5
Cape Girardeau	New Broadway	June 21–22
Hannibal	Star	June 6–8
Vandalia	Orpheum	June 13–14
Montana		
Anaconda	Bluebird	June 18–19
Cut Bank	Electric	July 12–13
Hardin	Harriet	June 12–13
Havre	Lyric	June 9–10
Miles City	Star	June 26–27
Shelby	Orpheum	July 7–9
Nebraska		
Atkinson	Lyric	July 5–7
Coleridge	Orpheum	June 3–5
Neligh	Moon	June 12–13
O'Neill	Royal	July 12–13
Wilber	Moon	June 12–13
New Hampshire		
Alton Bay	Bay View Pavilion	August 19–20
Bethlehem	Colonial	October 8
Hinsdale	Monitor	July 20
Milton Mills	Miltonia	July 2
North Conway	Masonic Hall	July 8–9
Seabrook	O. U. A. M. Hall	June 15
Sunapee	Pike Hall	August 26–27 (changed from August 26)
Woodsville	Henderson	June 15–16
New Jersey		
Atlantic City	Strand	May 27–31
Beach Haven	Colonial	May 30
Collingswood	Collingswood	June 22–24
Gloucester	Apollo	June 20–21
Orange	Palace	June 2–4
New Mexico		
Las Cruces	Rio Grande	May 30–June 1
New York		
Babylon, L. I.	Babylon	May 27–28
Bayshore	Regent	May 27–28
Dansville	Star	June 14–15
Depew	Colonial	June 19
Hicksville, L. I.	Hicksville	June 2–3
Huntington	Huntington	May 30–June 1
Mamaroneck	Playhouse	June 13–14
Nichols	Nichols	July 4–5
Oyster Bay, L. I.	Lyric	June 13–14
Patchogue, L. I.	Patchogue	June 13–15
Poughkeepsie	Liberty	June 22–23
Queens Village	Community	May 19–20
Roslyn, L. I.	Tower	May 27–28
Rye	Playhouse	June 9–10
Salamanca	Andrews	June 5–6
Springville	Pantheon	June 19–21
Suffern	Lafayette	May 30–31
Webster	Grange Hall	June 24–25
Ohio		
Dillonvale	Arcade	July 15–16
East Palestine	Liberty	June 15–16
Lewisburg	Vans	July 22–23
Nutwood	Fowler High School	July 21
Steubenville	Olympic	June 29–30
Wellington	Lonet	June 28–29
West Liberty	Strand	June 7–8
Oklahoma		
Bristow	Princess	June 19–20
Broken Bow	Arrow	July 10–11
Claremore	Yale	July 15–16
Covington	American	June 11–12
Cromwell	Rex	June 9–10
Depew	Palace	July 30–August 1
Elk City	Rex	June 5–6
Fairfax	Rex	June 30–July 1
Gutherie	Pollard	June 3–4
Hominy	Pettit	June 27–28
Hugo	Erie	June 27–28
Marlow	Whiteway	June 6–7
Pierson Switch	Rex	October 3–4
Vinita	Lyric	August 5–6
Pennsylvania		
Beach Haven	Colonial	May 30
Berwick	Strand	June 8–9
Carbondale	Irving	May 26–28
Eynon	Eynon	July 27
Hanover	Opera House	June 27–29
Hawley	Dreamland	August 2–3
Honesdale	Lyric	July 30–August 1
Mauch Chunk	Opera House	July 27–28
Olyphant	Opera House	June 6–7
Pottstown	Hippodrome	June 13–14
Red Lion	Opera House	July 6–7
Shenandoah	Capitol	June 2–4
Sunbury	Strand	July 25–27
West Chester	Rialto	May 23–25
Rhode Island		
Arctic	Palace	June 19–22
Riverside	Lyric	June 11
Rocky Point	Casino	July 4–5
Wakefield	Opera House	June 7–8
Woonsocket	Laurel	May 29–June 1 (changed from May 30–June 1)
Tennessee		
Lexington	Princess	July 13–14 (changed from August 3)
Milan	Criterion	July 18–19
Paris	Capitol	September 9
Texas		
Follett	Criterion	November 18–19
Shamrock	Texas	May 18–19
Utah		
Midvale	Iris	May 22–23
Vermont		
Chelsea	Town Hall	August 10
South Londonderry	Town Hall	August 8–9
South Royalton	Opera House	August 13
Tunbridge	Town Hall	August 11
West Fairlee	Bean Hall	August 12
Virginia		
Alexandria	Richmond	August 24–25
Clarksville	Crescent	September 7–8
Cobham	Merry Mills	July 13–14
Fredericksburg	Leader	July 18–19
Kilmarnock	Opera House	July 20
Manassas	Dixie	June 24–25
Quantico	Marine Barracks	June 21
Rural Retreat	Cameo	August 4–6
St. Charles	Princess	September 30–October 1
St. Paul	Gaiety	November 11–12
West Virginia		
Eccles	Lyric	August 19
Martinsburg	Apollo	June 22–23
Matoaka	Matoaka	July 25
War	Murphy	August 25
Wisconsin		
Horicon	Pastime	July 1–2
Portage	Portage	June 14–15
Racine	Rialto	June 20–25
Wittenberg	Opera House	August 27–28

Wallace Prepares for Idaho Firemen

The annual convention of the Idaho Firemen's Association will be held in Wallace, Idaho on July 31 to August 2, and the local Board of Trade are making plans to entertain the visitors and make their stay a pleasant one.

Chief John C. Boyd, president of the Idaho association and chief of Wallace, would like chiefs who intend going to the convention of the Pacific Coast Fire Chiefs' Association or the International Association of Fire Chiefs, to visit his city. He advises that those who plan to motor to the coast would do well to consider the Yellowstone Trail as the best highway, especially between Missoula and Spokane.

Southeastern Chiefs Meet

The Southeastern Association of Fire Chiefs, a division of the International Association of Fire Chiefs, held its first meeting since its organization last fall at St. Petersburg, Fla., recently.

The section group has for its territory, Virginia, South Carolina, North Carolina, Georgia, Florida, Alabama, Tennessee and Mississippi.

Chief J. T. McNulty of St. Petersburg, Fla., was elected president, and Atlanta, Ga., was chosen as the place for the 1928 convention. The other officers are Chief Walter S. Blanton, Macon, Ga., vice-president; Chief F. E. Donnald, Greenville, S. C., second vice-president; Chief D. S. Copeland, third vice-president; Chief H. W. Whitener, Hickory, N. C., secretary; Chief Donald B. White, Florence, Ala., treasurer.

The state vice-presidents are as follows: Walter S. Blanton, Georgia; J. T. Haley, North Carolina; E. F. Beville, Florida; V. P. Adair, South Carolina; R. W. Milan, Alabama; Chief Collins, Tennessee; W. F. C. Partin, Mississippi, and Chief Foster, Virginia.

JOHN A. STULB.

School Children Inspect Fire Department—Pupils of the public schools at Cedar Rapids, Ia., have been afforded a chance to learn the operation of the fire department. Parties of children are shown through the station after school hours and explained the operation of the various equipment there for the extinguishment of fire. This is part of the fire prevention educational campaign of the city.

NEW JERSEY CHIEFS AMEND BY-LAWS AT SOMERVILLE CONVENTION

Changes Made in Burial Benefit Rule—Two Chiefs Injured while Returning from Meeting When Automobile Skidded

THE outstanding features of the May meeting of the New Jersey Fire Chiefs' Association held in Somerville were the change in the by-laws relative to the burial benefit, and the accident which occurred when Chiefs McMillan and Exall were injured when their automobile skidded on a wet pavement.

The meeting was held in the Regent theatre with 178 chiefs present. Through the courtesy of the Pyrene Manufacturing Company, their picture, "Fortify for Fire Fighting," was shown. The ladies of the Methodist Church served luncheon. After the adjournment, the delegates were escorted through the famous Duke estate, through the courtesy of the superintendent.

According to the by-laws of the association before they were amended, the members could not become members of the beneficial class if they were over fifty-five years of age. The age limit has been raised to sixty-five. The amendment also contains the provision that the beneficiary shall be entitled to $400.

Charles W. Weeks, deputy commissioner of the state labor department spoke on the fire hazards as they relate to the labor department and the hazards in reference to oil burners. Chief James J. McMillan of Orange read a paper on "Oil Burners and their Hazards," which was very interesting.

Returning from the convention, Chief McMillan had William Exall, secretary of the New Jersey Firemen's Association with him as guest. The automobile in which they were riding skidded on a wet pavement and crashed into a telegraph pole. Chief McMillan was taken home suffering from a serious head injury and a broken rib but he is out of danger. Chief Exall was removed to St. Mary's Hospital for treatment for a broken knee cap and damages to the main tendon of his left leg.

The next meeting of the association will be held in Red Bank, N. J., some time in July—the date has not been set.

Office Built Over Fire Alarm Box

When a new building was under construction in San Francisco, Cal., the contractor erected a field office at the corner of the lot. He had, however, to clear a fire-alarm box, so he elevated the office twelve feet. In order to call the public's attention to the location of the box, the supporting posts were painted with white strips.

CHARLES W. GEIGER.

Merrill, Wis., Receives New Pumper—A Peter Pirsch pumper has been delivered to Merrill, Wis.

Watsonville, Cal., Purchases Siren—A diaphone fire alarm system has been purchased by Watsonville, Cal., from the Gamewell Company.

Amanda, Ohio, Has Chemical Truck—Sixty farmers in the vicinity of Amanda, Ohio, have purchased a Boyer chemical car on which are mounted two sixty-gallon chemical tanks.

Portable Extinguisher Explodes in E. Chicago, Ind.—A 2½-gallon portable type of fire extinguisher exploded in East Chicago, Ind., and luckily no one was hurt seriously. The extinguisher was placed in an inverted position, but failed to discharge. An attempt was then made to remove the cap, but the cap was on very tight and it was hard to move. When the last thread of the cap was reached, the extinguisher was exploded with a loud report. The one who was operating the device was thrown back stunned but was not hurt. The inside of the extinguisher was a twisted wreck.

New Rules of the New York Fire Department

(*Continued from page* 483)

wearing of the summer uniform a semi-starched white, rolling collar, with cravat, may be worn.

For Fire Duty in Winter; and at Night During other Seasons: A dark grey flannel shirt may be worn.

All Other Members—Dark blue flannel, double-breasted, between Sepetmber 15th and June 1st, except that between September 15th and November 1st, and April 15th and June 1st a dark blue flannel, single breasted, with large rolling collar may be worn.

For summer wear: A black shirt of lighter weight, with rolling collar of the same material.

INSIGNIA OF RANK

SEC. 316. Chief of Department—Five trumpets, measuring one and five-sixteenth inches each, crossed, bells outward and projecting beyond mouthpieces so as to form a design one and one-half inches in diameter, to be made of metal and affixed, and to be the property of the Department.

Deputy Chiefs of Department—Same as Chief of Department except that there shall be three trumpets, measuring one and one-half inches each, crossed, with bells downward.

Chief of Battalion—Same as Deputy Chiefs of Department except that there shall be two trumpets, crossed, with bells downward.

Captains of Engine Companies (except Captains attached to fireboats)—Same as Chief of Battalion except that the trumpets are to be parallel, with the bells downward, and close together. The insignia for the cap is to have the number of the company in raised letters midway between the trumpets, which are to be placed three-eighths of an inch between bells.

Captains of Rescue Companies—Same as for Captains of engine companies, except that smoke helmet be located in the center between two life guns, barrels pointing upwards, with roof rope and reel above helmet, life line and slug located below, with number of company on the breathing bag of the helmet.

Captains of Companies Attached to Fireboats—Two parallel trumpets, with bells downward, anchor between trumpets, company number above; to be in silver bullion, on dark blue cloth, surrounded with a bullion cord, size about 1½ by 1⅞ inches.

Captains of Hook and Ladder Companies—Two upright axes, with the blades facing each other. The insignia for the cap to have the number of the company in raised figures midway between the axe helves, which are to be placed three-eighths of an inch between helves.

Lieutenants of Engine Companies (except Lieutenants attached to fireboats)—Same as Captains, except that there shall be only one trumpet. The insignia for the caps to have the trumpet placed horizontally, the bell to the left and the number of the company above the centre.

Lieutenants of Rescue Companies—Same as for Captains of Rescue Companies, except that there shall be only one life gun, placed horizontally to the rear of headgear of smoke helmet, barrel pointing to the right.

Lieutenants of Companies Attached to Fireboats—One trumpet horizontally enclosed with a circle 1½ inches in diameter, bell to the left and anchor under trumpet; company's number over trumpet in silver bullion on dark blue cloth, surrounded with a bullion cord. The device to be worn on summer caps shall read as above except "white duck" instead of "blue cloth."

Lieutenants of Hook and Ladder Companies—Same metal as Captains' devices except that there shall be only one axe. The insignia for the cap and collars shall have one axe placed horizontally, the blade to the right. On cap insignia the number of company shall be placed above axe.

SEC. 317. Insignia for Classes 1, 2, 3 shall be worn on both sleeves and shall be as follows:

Class 1—A Maltese cross, gold plate.
Class 2—A Maltese cross, silver plate.
Class 3—A Maltese cross, bronze.

Insignia to be placed on the centre of sleeves with the top of the emblem pointing to the shoulder, the bottom of he cross one-quarter inch above the stitching of the cuff. Where more than one insignia are worn, the highest awarded shall be placed in the centre, next highest to the right, and third highest to the left, a quarter of an inch between points.

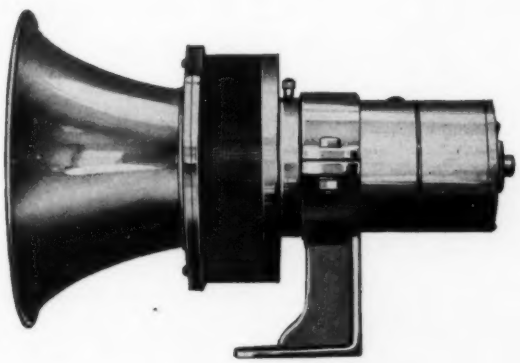
(*To be continued*)

Davenport, Ia., May Move Fire Station—Hose Co. No. 1 of Davenport, Ia., may be moved closer to the factory section.

Hardin, Mont., Provides Club Rooms—The city officials of Hardin, Mont., have rented two rooms to be fitted up as club quarters for the use of the members of the volunteer fire department.

C. A. M.

The Greatest of All Fire Apparatus Sirens



TEST after test in actual fire department service has easily proven the superiority of the C. A. M. siren for fire apparatus.

Once you hear the sharp command—the distinctive, penetrating, far-reaching sound of the C. A. M. siren, you'll agree that it has no equal as a warning signal to clear the way for fire apparatus.

The C. A. M. is a *quality* siren—sturdily made of the finest materials obtainable. It is *unconditionally guaranteed.*

We'll gladly send you one on trial.

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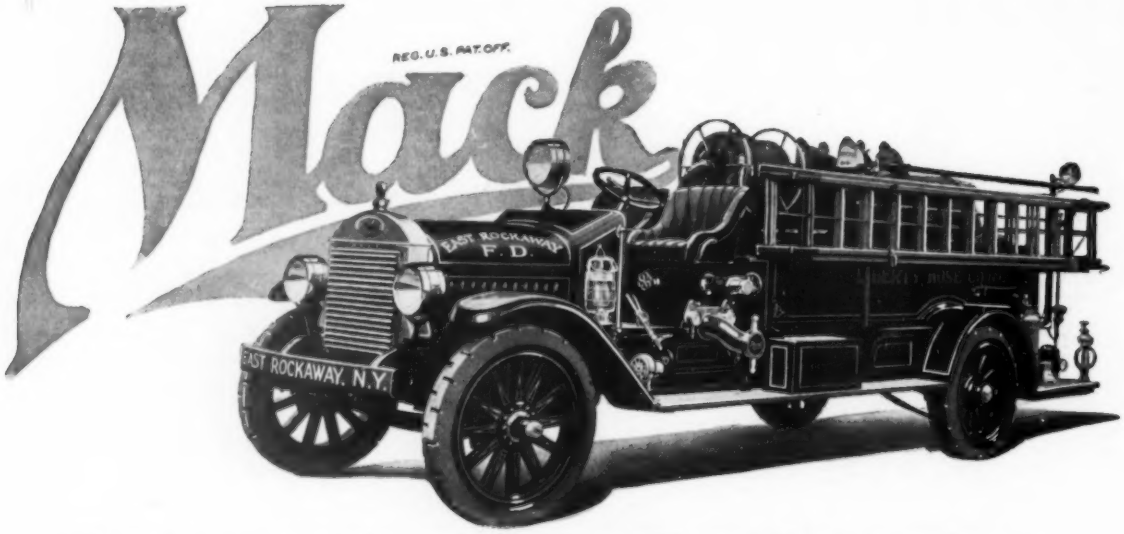


Progressive Fire Engineering

FOR two decades great metropolitan centres have recognized the values in MACK fire-fighting units, but only within recent years have smaller communities seemed to realize that neither economy nor protection is procured by investing in apparatus of unknown worth.

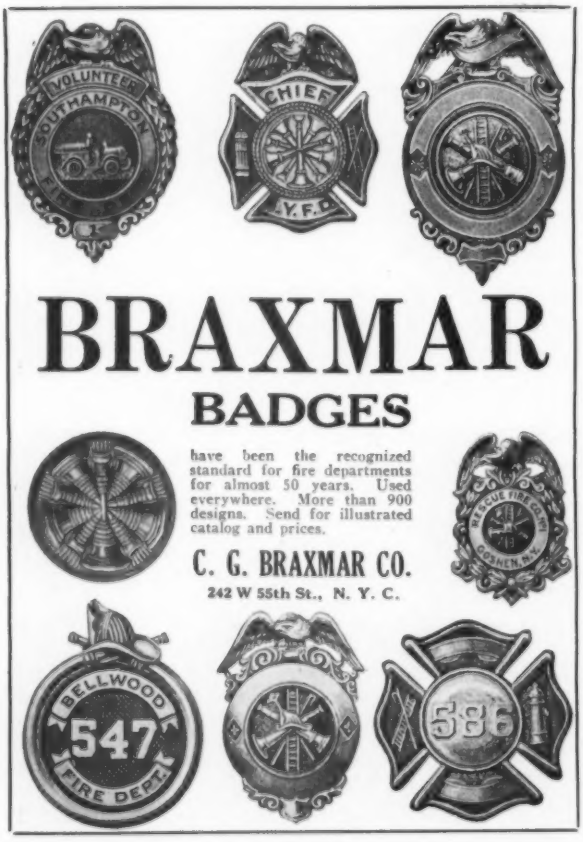
An example of high-grade equipment designed for smaller districts is the Triple Combination 500-gallon pumper illustrated. It has the ability to throw three first class streams from a hydrant, two of them from draft and the other by a special four-ratio pumping transmission particularly arranged for hydrant work.

A 100-gallon tank and hose on automatic reel permits a small fire to be combatted with minimum water damage. The chain drive and oversize tire equipment facilitates speed over bad roads common to semi-rural sections.

The full line of MACK Fire Apparatus includes motors of either 4 or 6 cylinders and pumping engines with capacities ranging from 350 to 1000 gallons per minute. Send today for complete descriptive literature.

MACK TRUCKS, INC.
INTERNATIONAL MOTOR COMPANY
25 Broadway New York City

One hundred and four direct MACK factory branches operate under the titles of: "MACK-INTERNATIONAL MOTOR TRUCK CORPORATION", "MACK MOTOR TRUCK COMPANY", or "MACK TRUCKS OF CANADA, LTD."



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have been the recognized standard for fire departments for almost 50 years. Used everywhere. More than 900 designs. Send for illustrated catalog and prices.

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WORCESTER FIRE ALARM SIGNAL

Made to meet local conditions. Four sizes. Operated by either steam or air.

Worcester Fire Alarm Signal is the result of many years' manufacturing experience. Built by specialists.

Our catalog R-51 will give you interesting information. It is yours for the asking.

Union Water Meter Co.,
Worcester, Mass.

New York: 50 Church St., Philadelphia, 411 Bulletin Bldg.

UNION

Water Meters - Chronometer Valves
Easy Turning Stops - Pressure Regulators
Presses for Lining Pipe - Alarm Signals

"Eastern Regulars" Limit Party to 100

To insure the maximum comfort for those who will travel to the convention of the International Association of Fire Chiefs at Portland, Ore., with the Eastern Regulars on the special Pullman train christened "The Fire Chief," the party has been limited to one hundred members. The train will be made up of the latest type of sleeping cars containing drawing rooms, compartments and berths, and a private assembly and baggage car. On the return trip, the party will travel from Duluth on one of the luxurious lake steamers.

A booklet has been prepared outlining in detail the scenic spots that will be visited and describing the route most vividly.

The following is the schedule of the trip, based on standard time:

Sunday, July 31

Leave New York ..... 6:00 PM, LVRR
Leave Newark (Meeker Avenue) ..... 6:30 PM, LVRR
Leave Philadelphia (Reading Terminal) ... 6:15 PM, Rdg. Co.
Leave Bethlehem ..... 7:55 PM, LVRR

Dinner in diner.

Monday, August 1

Turn your watch back one hour to Central Time

Arrive Chicago Dearborn Station ..... 9:00 PM, CNRv.
Leave Chicago North Western Station..... 10:00 PM, C&NW

All meals in diner.

Tuesday, August 2

Arrive St. Paul..... 9:30 AM, C&NW
Leave St. Paul ..... 10:30 AM, No. Pac.

All meals in diner.

Wednesday, August 3

Turn your watch back one hour to Mountain Time

Arrive Gardiner..... 6:00 PM, No. Pac.
Leave Gardiner ..... 6:15 PM, Auto
Arrive Mammoth Hot Springs ..... 6:40 PM, Auto

Breakfast and luncheon in diner. Dinner and lodging at Mammoth Hot Springs Hotel.

Thursday, August 4

Leave Mammoth Hot Springs..... 8:15 AM, Auto
Arrive Old Faithful..... 12:22 Noon, Auto

Breakfast at Mammoth Hot Springs Hotel. Luncheon, dinner and lodging at Old Faithful Inn.

Friday, August 5

Leave Old Faithful ..... 1:50 PM, Auto
Arrive Yellowstone Lake..... 4:58 PM, Auto

Breakfast and luncheon at Old Faithful Inn. Dinner and lodging at Yellowstone Lake Hotel.

Saturday, August 6

Leave Yellowstone Lake..... 9:10 AM, Auto
Arrive Grand Canyon..... 12:00 Noon, Auto

Breakfast at Yellowstone Lake Hotel. Luncheon, dinner and lodging at Grand Canyon Hotel. Side trip to Dunraven Pass.

Sunday, August 7

Leave Grand Canyon ..... 9:20 AM, Auto
Arrive West Yellowstone ..... 11:46 AM, Auto
Leave West Yellowstone ..... 12:45 PM, Auto
Arrive Gallatin Gateway ..... 5:00 PM, Auto
Arrive Bozeman Hotel ..... 5:45 PM, Auto
Leave Bozeman Hotel ..... 6:45 PM, Auto
Arrive Bozeman Depot ..... 6:55 PM, Auto
Leave Bozeman ..... 7:15 PM, No. Pac.

Breakfast at Grand Canyon Hotel. Luncheon at West Yellowstone Station Restaurant. Dinner at Bozeman Hotel.

Monday, August 8

Turn your watch back one hour to Pacific Time

Arrive Spokane ..... 8:45 AM, No. Pac.
Leave Spokane ..... 9:00 AM, SP&S
Arrive Portland ..... 8:00 PM, SP&S

All means in dinner. Transfer on arrival at Portland to Hotel Multnomah, our headquarters.

Tuesday August 9 to Friday, August 12

Convention of International Association of Fire Chiefs at Portland. Entertainment provided by local committee.

Note: Portland is on Pacific Standard Time which is 3 hours earlier than Eastern Standard Time. For instance when it is 7:00 A.M. at Portland it is 10:00 A.M. at New York, Eastern Time, or 11:00 A.M. Daylight Saving Time.

(*Continued on page* 511)

Boy Scouts Have Home Made Apparatus

The Boy Scouts of Scoutland, a summer and fall camp near Dover, Mass., are very proud of their record in extinguishing brush and forest fires by use of apparatus especially designed for the purpose by George W. Austin, field scout executive of the Boston Council, Boy Scouts of America. Mr. Austin is a member of the Box 52 Association and of the registration committee of the New England Fire Chiefs' Association.

The truck is equipped with four 2½ gallon chemical extinguishers, four brooms, two shovels, axe, crow-bar, hand pump with suction hose, eight 6 quart cans for carrying water, and four cans of soda and acid for recharging extinguishers. This equipment is mounted on a two wheeled truck.

It has rendered efficient service on numerous occasions and has saved outlying buildings that were threatened by brush fires. Chief Daniel F. Sennott, of Boston, Chief R. T. Bragg, of Dover, and Chief Quinlan of Needham, visited the scout camp recently and complimented the boys for efficiency in a special drill that was pulled off for the benefit of the chiefs.

The Boy Scouts of America have established a Standard Test for Firemanship.

To obtain a merit badge for Firemanship, a scout must:

1. Demonstrate how to turn in an alarm for fire.
2. Demonstrate how to enter burning buildings.

Upper—Fire Apparatus Designed by Scout Executive. Lower—Scouts in Action Extinguishing Brush Fire.

3. Demonstrate how to prevent panics and the spread of fire.
4. Understand the use of hose,—unrolling, joining-up, connecting to hydrant, use of nozzle, etc.
5. Understand the use of escapes, ladders, and chutes, and know the location of exits in buildings which he frequents.
6. Demonstrate how to improvise ropes and nets.
7. Explain what to do in case of panic, understand the fireman's lift and drag, and how to work in fumes.
8. Demonstrate the use of fire extinguishers; how to rescue animals; how to save property; how to organize a bucket brigade; and how to aid the police in keeping back crowds.

In this connection a very thoughtful and experienced fire lieutenant recently said:

"Of course, this is a simple test, and nobody kids himself that a Scout who takes it will become a regular fireman right away. On the other hand these things are all useful, and are liable to come in handy any time. It stands to reason that the lad who has passed an examination will act quicker in an emergency than the one who hasn't!" (More than 300,000 Scouts have passed this test).

Tacoma, Wash., Wants Fire Boat—Chief Carlson of Tacoma, Wash., recommended that the city secure a fire boat and additional fire stations.

CONVENTION DATES

May or June—SOUTH CAROLINA STATE FIREMEN'S ASSOCIATION. 22nd Annual Convention, Darlington, S. C., date at pleasure of Convention City. Secretary, R. S. Hood, Sumter, S. C.

May 31-June 3—NEW YORK STATE ASSOCIATION OF FIRE CHIEFS. 21st Annual Convention, Niagara Falls, N. Y., in connection with Conference of New York State Mayors and Other City Officials. Secretary, Chief James H. Golden, Cohoes, N. Y. Chairman, Exhibit Committee, Chief John Espey, Elmira, N. Y.

June 1-2—INSTITUTION OF FIRE ENGINEERS (British). 4th Annual Conference, Liverpool, England. President, Firemaster A. Pordage, Edinburgh, Scotland. Interim Secretary, Miss M. B. Calder, Edinburgh Fire Brigade.

June 6-9—OKLAHOMA STATE FIREMEN'S ASSOCIATION. 33rd Annual Convention, Okmulgee, Okla. Secretary, Charles Slemp, 312 East 13th Street, Oklahoma City, Okla.

June 7-9—OHIO FIRE CHIEFS' ASSOCIATION. 10th Annual Convention, Mansfield, Ohio. Secretary, Chief Philip J. Harty, Fire Department, Youngstown, Ohio. Sheet and Tube Company.

June 7-9—SOUTH DAKOTA FIREMEN'S ASSOCIATION. Annual Convention, Pierre, S. Dak. Secretary, J. J. Waltner, Freeman, S. Dak.

June 8—NORTHWEST ARKANSAS FIREMEN'S ASSOCIATION. Annual Convention, Springdale, Ark. Secretary-Treas., F. M. Brock, Bentonville, Ark.

June 8-9—EASTERN ASSOCIATION OF SUPERINTENDENTS OF FIRE AND POLICE TELEGRAPH. Annual meeting, Hartford, Conn.

June 10-11—DELAWARE COUNTY FIREMEN'S ASSOCIATION. Annual convention Drexel Hill, Pa. Secretary, Timother McCarey, Chester, Pa.

June 14-16—TEXAS STATE FIREMEN'S ASSOCIATION. Annual Convention, San Antonio, Tex. Secretary, Olin Culbertson, Hillsboro, Tex.

June 15—NORTHWESTERN OHIO VOLUNTEER FIREMEN'S ASSOCIATION. 54th Annual Convention, Delphos, Ohio. Secretary, C. R. Bowerson, Toledo Ohio.

June 16-18—PROVINCIAL FEDERATION OF ONTARIO FIREFIGHTERS. Annual Convention Windsor, Ont., Can. Secretary-Treasurer, David H. Lamb, 132 Bellevue Ave. (2) Toronto.

June 16-18—MONTANA STATE FIREMEN'S ASSOCIATION. 36th Annual Convention, Helena, Mont. Secretary, D. E. Moser, Bozeman, Mont.

June 17-19—WISCONSIN STATE FIREMEN'S ASSOCIATION. 40th Annual Convention, Baraboo, Wis. Secretary, E. Philip Mueller, Jefferson, Wis.; State Organizer Chief H. H. Niemeyer, Portage, Wis.

June 17-20—SIX COUNTY FIREMEN'S ASSOCIATION. Annual Convention, Sunbury, Pa.

June 17-18—FOUR COUNTY FIREMEN'S ASSOCIATION. Annual Convention, Lehighton, Pa. Secretary, P. J. McNally, West Catasaqua, Pa.

June 18—LEBANON COUNTY FIREMEN'S ASSOCIATION. Annual Convention, Fredericksburg, Pa. Secretary, William I. Kutz, Box 233, Myerstown, Pa.

June 21-23—FLORIDA STATE FIREMEN'S ASSOCIATION. Annual Convention, Hollywood, Fla. Secretary, Chief F. C. Pfaender, Winter Haven, Fla.

June 21-23—HUDSON VALLEY VOLUNTEER FIREMEN'S ASSOCIATION. 38th Annual Convention, Poughkeepsie, N. Y. Secretary, Chief Chris W. Noll, Fire Department, Poughkeepsie.

June 21-23—KENTUCKY STATE FIRE CHIEFS' AND FIREMEN'S ASSOCIATION. 9th Annual Convention, Owensboro, Ky. Secretary-Treasurer, Capt. S. G. Render, 303 Speed Bldg., Louisville, Ky.

June 21-23—NEW ENGLAND ASSOCIATION OF FIRE CHIEFS. 5th Annual Convention, Congress Hotel, Portland, Me. Secretary, Chief John W. O'Hearn, Watertown, Mass. For reservations address Geo. F. Cobb Traffic Manager, 774 Albany Street, Boston, Mass.

June 21-24—THIRD SHORT COURSE IN FIRE PREVENTION. To be held at University of Illinois, Urbana. Address, C. E. Palmer, 401 Engineering Hall, University of Illinois, or State Fire Marshall John G. Gamber, Springfield, Ill.

June 27-29—MICHIGAN ASSOCIATION OF FIRE DEPARTMENT CHIEFS. Annual Convention, Bay City, Mich. Secretary, Chief Frank Ford, Highland Park, Mich.

July 12-14—MICHIGAN STATE FIREMEN'S ASSOCIATION. 53rd Annual Convention, Lansing, Mich. Secretary, H. L. Williams, Luddington, Mich.

July 13-14—INDIANA FIREMEN'S ASSOCIATION. 10th Annual Convention, Indianapolis, Ind. Secretary, Frank H. Miller, Fire Headquarters, Terre Haute, Ind.

July 19-23—SOMERSET COUNTY VOLUNTEER FIREMEN'S ASSOCIATION. Annual Convention, Rockwood, Pa. Secretary, J. R. Shanks, Rockwood, Pa.

July 21-22—CENTRAL NEW YORK VOLUNTEER FIREMEN'S ASSOCIATION. 34th Annual Convention, Cortland, N. Y. Secretary, Thomas F. Murray, Cortland.

July 25-28—DOMINION ASSOCIATION OF FIRE CHIEFS. 19th Annual Convention, Hull, Quebec. Secretary, Chief James Armstrong, Kingston, Ont.

July 27-28—VERMONT STATE FIREMEN'S ASSOCIATION. 38th Annual Convention, St. Albans, Vt. Secretary, Edwin D. Moore, Bennington, Vt.

July 31-Aug. 1-2—IDAHO STATE FIREMEN'S ASSOCIATION. Annual Convention, Wallace, Idaho. Secretary, Willard Adams, Rigby, Idaho.

Aug. 1-2—WASHINGTON STATE FIREMEN'S ASSOCIATION. Annual Convention (Tentative date), Chehalis, Wash. Secretary, H. S. Jenkins, City Electrician, Fire Headquarters, Bellingham, Wash.

Aug. 4-6—PACIFIC COAST ASSOCIATION OF FIRE CHIEFS. 34th Annual Convention, Portland, Ore. Secretary, State Fire Marshal Jay W. Stevens, 1014 Merchants' Exchange Bldg., San Francisco, Cal.

Aug. 6—CALIFORNIA STATE ASSOCIATION OF FIRE CHIEFS. Annual Convention, Portland, Ore. Secretary, Chief William Cooper, Richmond, Cal.

Aug. 7-8—OREGON STATE FIRE CHIEFS' ASSOCIATION. 8th Annual Convention, Portland, Ore. Secretary, Thomas Coates, Tillamook, Ore.

Aug. 8-9—UTAH STATE FIREMEN'S ASSOCIATION. Twentieth annual convention, Springville, Utah. Secretary, H. E. Anderson, fire headquarters, Salt Lake City.

Aug. 9—MASSACHUSETTS PERMANENT FIREMEN'S ASSOCIATION. Annual Convention, New Bedford, Mass.

Aug. 9-11—CUMBERLAND VALLEY VOLUNTEER FIREMEN'S ASSOCIATION. 26th Annual Convention, Western Port, Md., Secretary, C. L. Jacobs, Waynesboro, Pa.

Aug. 9-12—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. 55th Annual Convention, Portland, Ore. Secretary, Chief J. J. Mulcahey, Yonkers, N. Y.; Executive Secretary, State Fire Marshal Jay W. Stevens, Merchant's Exchange Bldg., San Francisco, Cal.; Chairman, Exhibit Committee, Chief Albert Herring, Murphysboro, Ill.

Aug. 14-16—NEW YORK STATE PERMANENT FIREMEN'S ASSOCIATION. Annual Convention, Elmira, N. Y. Secretary-Treasurer, Frank A. Emden, 1200 Lenox Avenue, Utica, N. Y.

Aug. 16-19—FIREMEN'S ASSOCIATION STATE OF NEW YORK, and WESTERN NEW YORK VOL. FIREMEN'S ASSOCIATION. Joint convention of both associations, Niagara Falls, N. Y. Secretary, State Association, Fred A. Davis, Fort Edward, N. Y.; Secretary, Western N. Y. Association, Henry A. Clark, 21 Porter Avenue, Batavia, N. Y.

Aug. 24-26—VIRGINIA STATE FIREMEN'S ASSOCIATION. 41st Annual Convention and tournament, Alexandria, Va. Secretary, E. K. Landis, Pulaski, Va.

Aug. 24-27—CALIFORNIA STATE FIREMEN'S ASSOCIATION. Annual Conference, Stockton, Cal. Secretary-Treasurer, H. E. Strasser, 1171 Tenth Street, San Diego, Cal.

Sept. 7—DELAWARE STATE FIREMEN'S ASSOCIATION. 7th Annual Conference, Rehoboth Beach, Del. Secretary, Sam H. Carson, Dover, Del.

Sept. 7-8—MISSOURI STATE FIRE CHIEFS' ASSOCIATION. 5th Annual Convention, Kirksville, Mo. Secretary, District Chief J. T. Lynch, Kansas City, Mo.

Sept. 7-8—MISSOURI ASSOCIATION OF FIRE FIGHTERS. 2d Annual Convention, Kirksville, Mo. Secretary, M. J. Mulvoy, 3500 S. Grand Boulevard, St. Louis, Mo.

Sept. 12-14—ARKANSAS STATE FIREMEN'S ASSOCIATION. Annual Convention, Russellville, Ark. Secretary, H. D. Compton, Little Rock, Ark.

Sept. 13-15—ILLINOIS FIREMEN'S ASSOCIATION. 40th Annual Convention, Jacksonville, Ill. Secretary, Roy A. Alsip, Champaign, Ill.

Sept. 13-15—MASSACHUSETTS STATE FIREMEN'S ASSOCIATION. Annual convention, Salem, Mass.

Sept. 20-21—IOWA STATE FIREMEN'S ASSOCIATION. 50th Annual Convention and Anniversary, Emmetsburg, Ia. Secretary, E. E. Parsons, Marion, Ia.

Sept. 22-24—NEW JERSEY STATE FIREMEN'S ASSOCIATION. 50th Annual Convention and Anniversary, Atlantic City, N. J. Secretary, William Exall, Chamber of Commerce Bldg., Newark, N. J.

Sept. 23—NEW JERSEY STATE FIRE CHIEFS' ASSOCIATION. Annual Meeting, Atlantic City, N. J. Secretary, Fred A. Trowbridge, 17 South Street, Morristown, N. J.

Oct. 4-6—PENNSYLVANIA STATE FIREMEN'S ASSOCIATION. Annual Convention, Shamokin, Pa. Secretary, Charles F. Clark, 411 Bellevue Avenue, Wayne, Pa.

Oct. 17-19—KANSAS STATE FIRE CHIEFS' AND FIREMEN'S ASSOCIATIONS. 11th and 40th Annual Conventions, Kansas City, Kan. Secretary, Chief K. D. Doyle, Wamego, Kan.

Newly Elected Fire Chiefs

SOUTH SAN FRANCISCO, CAL.—John Costa.

MILWAUKEE, ORE.—C. C. Miller.

OXFORD JUNCTION, IA.—Art Fintchey.

LE MARS, IA.—Herman Becker.

ALLIANCE, NEB.—Ward Hall (re-elected).

RICHWOOD, W. VA.—A. B. Campbell (re-elected).

MARLBORO, MASS. — Henry A. Brown.

EVERSON, WASH.—Clyde F. Reed.

MORNING SUN, IA.—R. E. Morrison.

MARENGO, ILL.—W. Arlington.

GREEN ISLAND, N. Y.—H. Holloway.

AVONDALE, PA.—Harvey M. Cook.

WAGNER, S. D.—Frank Thompson (re-elected).

SEQUIM, WASH.—M. P. Button.

HARVARD, NEB.—A. Hitch.

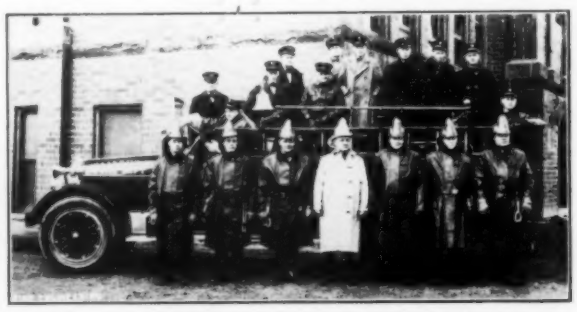
EAST RANDOLPH, N. Y.—Russell K. Barber.

OCEANSIDE, CAL.—E. E. White.

MATLOCK, IA.—J. Vant Hul.

WARREN, R. I.—W. A. Monast, (re-elected).

BLISS, N. Y.— F. T. James.



Watertown, Minn., Proud of Their New Apparatus

The volunteer fire department of Watertown, Minn., are proud of their new Nott Universal fire apparatus which his been placed in service comparatively recently. They have done some good work with their new apparatus.

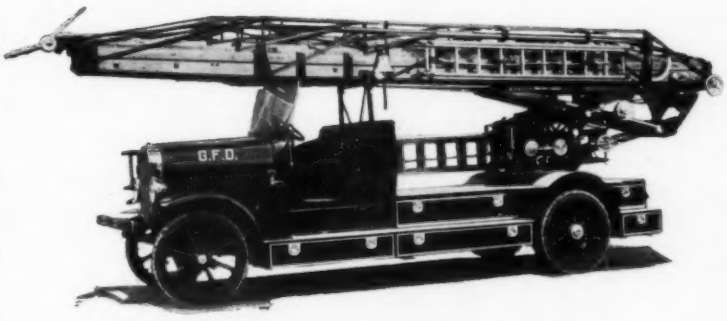
Howe Pumpers Shipped to Pennsylvania Towns—Howe pumpers have been sold to Valencia and Nicholson, Pa.

Jeffersonville, Ohio, to Purchase Apparatus—Bonds will be issued to finance the purchase of fire apparatus in Jeffersonville, Ohio.

Bradford Pa., Asked to Purchase Apparatus—A petition was presented to the council of Bradford, Pa., asking the city to purchase a modern fire apparatus.

GARY, IND. ACCEPTS

85 FT. MAGIRUS Aerial Ladder and Water Tower after SEVERE TEST!



85 ft. MAGIRUS Aerial Ladder and Water Tower Combination Truck, Fire Dept. GARY-Ind. Equipped with service-ladders, tools etc.—Measuring only 27' 4" over-all; 173" wheel-base. Only ONE MAN to drive the truck AND to operate ALL the different ladder-motions.

***Why* Gary *Ordered* a MAGIRUS:**

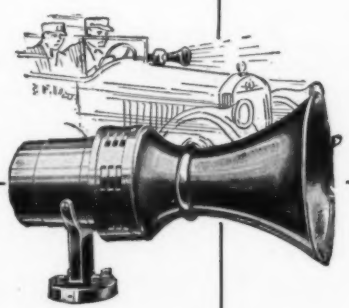
"After witnessing a demonstration of a MAGIRUS aerial it was the opinion of ALL that it is FAR SUPERIOR to any on which bids were submitted."
—*Gary Post Tribune.*

***Why* Gary *Accepted* its MAGIRUS the second day after its arrival at a special meeting:**

"The truck was approved finally after it had withstood a most rigid test during which it thoroughly demonstrated that it is capable of doing ALL AND EVEN MORE THAN IS CLAIMED FOR IT by its makers." —*Gary Post Tribune.*

AMERICAN MAGIRUS FIRE APPLIANCE CO., Inc.

4243 Broadway Indianapolis, Indiana



The Sterling No. 12 APPARATUS SIREN

for

The Chief's Car and Other Apparatus — the Siren that Dominates Traffic

Just a touch of the button and the mighty voice of the Sterling No. 12 clears traffic for blocks ahead! Can't be mistaken — never fails — endorsed by authorities everywhere. Complete with cord and switch, 6- or 12-v., only $40.00

STERLING LEADS IN

Electric Sirens designed exclusively for blowing code signals

Electric Sirens for general alarms — the famous Model "M".

Factory Sirens — the Model "F" —

Electric Whistles — the "Little Giant"

Write for Information

The Sterling Siren Fire Alarm Co., Inc.

61 Allen St., Rochester, N. Y.

Shuredry Salvage Covers

COST LESS—
WEIGH LESS—
MORE EASILY HANDLED

Chief Boyd, of the Knoxville, Tenn., Fire Department, has used "Shuredry" Salvage Covers for eight years. He says: "They are *waterproof, not affected by the weather, easy to handle, and altogether the most satisfactory covers we have ever used.*"

They do not freeze in winter, nor become tacky in summer. They are not subject to spontaneous combustion, nor to cracking where folded. One man can carry four up a ladder at one time.

Made in standard sizes. Write our nearest plant for samples and prices.

FULTON BAG & COTTON MILLS
Manufacturers since 1870
Atlanta, New Orleans, Brooklyn, St. Louis, Dallas, Minneapolis

MATHEWS
(Reg. U. S. Pat. Off.)
FIRE HYDRANTS
for
DOMESTIC
and
HIGH PRESSURE
Service

NOTE—
The positive waste value.

All operating threads are dry, being above the stuffing-box.

No toggles, no small, quick-wearing parts.

All moving parts are bronze or bronze-bushed.

The outside casing permits replacing a two-way standpipe with a steamer and two-way standpipe without digging up the ground.

An easily installed
EXTENSION SECTION
readily adapts them to new grades.

VALVES and BOXES
CAST IRON PIPE
(*Sand-Cast or "Sand-Spun"*)
FITTINGS

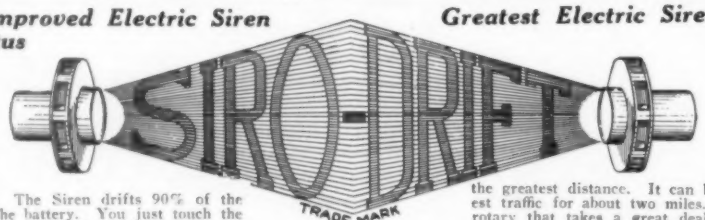
R. D. WOOD & CO., Phila., Pa.

The New and Improved Electric Siren for Fire Apparatus

SIRO-DRIFT

A Siren that will operate on one-tenth of the battery juice of any other electric Siren of its size. The Siren drifts 90% of the time without the aid of the battery. You just touch the Siren button for one-half second and the Siren drifts on for two or three minutes.

One-half second of current, applied means ten seconds running without any current, with plenty of noise—or two to three minutes at a slower rate of speed.



Greatest Electric Siren Ever Built for Fire Apparatus

SIRO-DRIFT

Is 8 inches in diameter and gives the rising and lowering tones that carry the greatest distance. It can be heard through the thickest traffic for about two miles. Has a specially designed rotary that takes a great deal less power to drive than any other electric Siren.

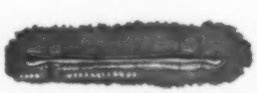
We gladly ship a SIRO-DRIFT SIREN to any city on approval, transportation prepaid. Comes in three brackets—cross bar, on frame in front of radiator and under-the-hood.

Send at once for complete information

B & M Siren Manufacturing Co. LESTER H. MILES, *Owner* 929-931 South Main Street, Los Angeles, Calif.

BI-LATERAL FIRE HOSE

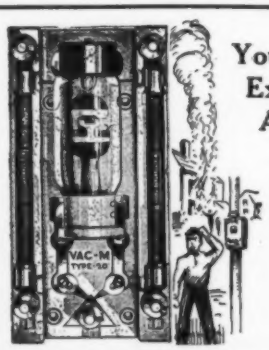
THE BI-LATERAL FIRE HOSE CO.
230 West Randolph St., Chicago, Ill.



The hose that never bursts at fires because fine pin-holes never wet the jacket unforeseen by the firemen.

The DUROBUILT improvement will increase fire hose service more than double.

The buyer is insured by a six-year specific guarantee.



Your Trained Men and Expensive Apparatus Are Worthless — If

the alarm is not received. You must get the alarm. The delicate instruments of your system must be never-failing in their operation. Most chiefs insure this by protecting them with VAC-M Arresters against lightning and short circuits.

DO YOU? IT PAYS!

Full Details on Request.

THE NATIONAL ELECTRIC SPECIALTY COMPANY
TOLEDO .... OHIO.

FIRE DEPARTMENT ACTIVITIES

Newton, Mass., Increases Pay of Men—An increase of $100 a year has been voted for the firemen of Newton, Mass.

Greene, Ia., to Install Siren—A fire alarm siren will be installed in Greene, Ia.

Augusta, Ga., Purchases Pumper—Augusta, Ga., has purchased an Ahrens-Fox pumper.

Dillon, S. C., Receives New Pumper—A 750-gallon Seagrave pumper has been delivered to Dillon, S. C.

Glendale, W. Va., Forms Department—A volunteer fire department has been formed in Glendale, W. Va.

Pensgrove, N. J., to Purchase Apparatus—Pensgrove, N. J., is planning to purchase fire apparatus.

Westwood, N. J., to Purchase Apparatus—Plans have been made in Westwood, N. J., for the purchase of fire apparatus.

Clarksburg, W. Va., Votes for New Station—The people of Clarksburg, W. Va., voted for the construction of a new fire station.

Beaver Meadows, Pa., Purchases Apparatus—Beaver Meadows, Pa., has ordered a 400-gallon pumper equipped with a sixty-gallon chemical tank.

Plan Protection of Pike National Forests—Plans are being made for an organization to protect Pike national forest during the summer months.

Florence, Ala., Holds Open House—Hundreds of residents of Florence, Ala., had the opportunity of inspecting the new fire station recently opened.

Nesquehoning, Pa., Installs Fire Alarm System—A fire alarm system consisting of nine fire alarm boxes has been installed in Nesquehoning, Pa.

Fire Alarm Superintendents to Meet in Hartford, Conn.—The Eastern Association of Superintendents of Fire and Police Telegraph will meet in Hartford, Conn., on June 8-9.

Ex-Chief Bunker of Cambridge, Mass., Dead—Nathaniel W. Bunker, ex-chief of the Cambridge, Mass., fire department, died in Sherman, Cal., at the age of eighty-three years.

Haverhill, Mass., Has Fire Prevention Campaign—A parade marked the fire prevention campaign held in Haverhill, Mass. Companies from Haverhill, Georgetown, West Newbury, Merrimac, Plaistow and Newton participated.

Wakefield, Mass., Firemen Use Army Trench Hats—Firemen of Wakefield, Mass., are using the steel trench hats made popular by the World War. The firemen claim that the steel hats are lighter than fire helmets.

Portland, Oregon, Firemen Qualify as Teachers—Fifteen members of Portland, Ore., fire department have received certificates from the Red Cross qualifying them as teachers in first aid.

Shingle Roofs Blamed for Berkeley, Cal., Fires—Chief Rose blamed shingle roofs for fifty-two per cent of the fires in Berkeley, Cal. They were caused by sparks from chimneys falling on shingle roofs.

Springfield, Mass., Purchases Apparatus—Springfield, Mass., has awarded the Seagrave Company a contract for fire apparatus to replace very old Knox equipment now in use. The total cost of the apparatus is $33,000.

South Bend, Ind., Opens New Station—A new fire station has been opened in the River Park area of South Bend, Ind. Both platoons were on duty on the opening day so that the residents would have the opportunity of meeting the men who are to be stationed there.

Suffolk County, N. Y., Has Many Forest Fires—Damage estimated at $300,000 to timber and game has been caused by a number of forest fires in Suffolk county, L. I., N. Y. About thirty miles of ground about the old Camp Upton were burned over.

Bridgeport, Conn., Adjusts Pensions—Bridgeport, Conn., has passed a measure to adjust the pensions of the older members to the present scale. Retirement from the ranks on half pay now pays a pension of $1,150 or half pay for privates and half of $2,700 or $3,000 for lieutenants and captains respectively.

Ossining, N. Y., Delays Purchase of Apparatus—When the matter of the purchase of fire apparatus came up at a meeting of the council of Ossining, N. Y., a deadlock resulted among the members, and the purchase of the apparatus was tabled indefinitely.

Sioux City Pay Increase Before Court—The problem of whether the voters have a right to grant the firemen an increase in pay by referendum vote after the city council has refused to sanction the ordinance, is a matter to be decided by the supreme court.

Salem, Ore., to Install Fire Siren—A siren will be installed in the city hall of Salem, Ore. At present there are two shifts of firemen and in the event of a large fire, there is no way of calling the men on the off-shift. The siren is claimed to have a high range of audibility.

Boston Chiefs to Carry First Aid Equipment—Commissioner Hutman of Boston, Mass., plans to have a box placed at the rear of the cars of the deputy and district chiefs in which will be placed first aid equipment, portable search lights, life net, gas masks and fire extinguishers.

Hose Stream Breaks Up Student Rioters—Members of the Johns Hopkins sophomore class in Annapolis, Md., attempted to break up a dinner of the freshman class. Shots were fired at the police and thirty of the four hundred students involved were injured. High pressure fire streams finally broke up the rioting students.

Fire Started in Radio Room of Theatre—Fire broke out in a room of the Loew's Lexington Theatre in New York city which was being fitted up for radio broadcasting. The fire was confined to the room in which it started, but when smoke drifted into the auditorium, the 2,500 people there marched out in orderly procession.

San Pedro, Cal., Instructs in Work of Fire Alarm—Ten instructors, firemen from the San Pedro, Cal., department, have been assigned to go about the city instructing the people in the proper operation of the fire alarm box. These men were made available to civic organizations and luncheon clubs that desired such talks.

Citrus Belt Fire Chiefs Meet in Riverside, Cal.—The Citrus Belt Fire Chiefs' Association held a regular meeting at the central fire station in Riverside, Cal. J. W. Stevens, state fire marshal, was among those who addressed the chiefs. The object of the association, which is a new organization, is to protect the citrus zone in California.

Chiefs Attend Boy Scouts Barbecue—A number of Massachusetts chiefs attended a barbecue as guests of George W. Austin, boy scout leader and Chief R. T. Breagy of Dover. Among the guests at the scout camp were Chief T. R. Quinlan of Needham, Chief J. H. Neary of Natick and Chief John W. O'Hearn of Watertown.

Lansing, Mich., Plans Pension Fund—Lansing, Mich., is considering the creation of a pension fund that will be independent of politics or municipal ordinances for those members who have served twenty-five years or who may become physically disqualified for further service. The fund will be started from profits derived from a showing of "The Fire Brigade."

Allegan and Otsego, Mich., to Compete—Allegan and Otsego, Mich., are to stage a fire prevention contest of their own for one year. Each department agrees to use not more than twenty-five men, and the department which responds to the greatest number of calls during the year will be host to the other department at a dinner. In other words, they will be the losing department.

Columbus, Neb., to Limit Number in Department—Resolutions have been drafted asking that the number of men in the fire department of Columbus, Neb., be limited and that the age limit be raised from the minimum of eighteen years to twenty-one. The decrease of the number of volunteer firemen was asked because of the city's liability under the new state law which considers volunteer firemen as employees of the city.

Chicago, Ill., Considers Pension Fund—Hearings have been held in Chicago in reference to the reorganization of the pension fund. A deficit of $80,000 has been incurred in 1926, and it is believed that the deficit this year will be greater. At the present time the men contribute 2½% of their salary and the city levies a tax of one-third of a mill. It is planned to have the firemen contribute the same amount as before but to have the city pay an amount equal to fifteen per cent of the aggregate salaries of the men.

PROPOSED IMPROVEMENTS

Lowville, Lewis Co., N. Y.—Village purchased a Sanford combination hose and chemical car for the fire department.

Halliday, Dunn Co., N. D.—Contemplating the purchase of additional equipment for the fire department.

New Bremen, Auglaize Co., Ohio—Village recently purchased a Peter Pirsch triple combination car for the fire department.

Bellefontaine, Logan Co., Ohio—It is being urged that the fire department increase the number of men. At present there are only 6 men and one chief.

West Chester, Chester Co., Pa.—Chief Huber of Volunteer Fire Dept. urging the installation of a fire alarm system here.

Freemansburg, Northampton Co., Pa.—Town to purchase a piece of apparatus for the fire department.

Monroe, Green Co., Wis.—City Council considering the purchase of a pumper for use in rural districts.

La Plata, Charles Co., Md.—At a recent election it was voted that better fire protection facilities should be procured for the town. H. H. Hawkins and F. Brooke among those interested.

Webster, Worcester Co., Mass.—Purchase of motor pumper now being considered.

Fitchburg, Worcester Co., Mass.—Chief H. J. Hyatt is desirous of purchasing an additional pumping unit and to remodel the present fire stations.

Clifton, Essex Co., Mass.—Plans are under way for the erection of a new fire station. Percy L. Martin interested.

Salem, N. J.—Members of local department are endeavoring to raise funds for improved equipment.

Neptune, Monmouth Co., (Asbury Park P. O.) N. J.—Purchase of fire apparatus is being considered. Councilman Hurley is interested.

Hackensack, Bergen Co., N. J.—Ordinance has been passed appropriating funds for purchase of aerial ladder truck. Chas. Schaefer, Fire Commissioner, Wm. Zeigler, Chief.

Three Bridges, Hunterdon Co., N. J.—Efforts will be made by the recently organized volunteer fire company to purchase fire apparatus. Geo. W. Dilts is chief. Town Clerk may also be addressed for information.

Bakersfield Kern, Co., Cal.—National Board of Fire Underwriters recommended the installation of a complete fire alarm system and the erection of an isolated building.

Valdosta, Lowndes Co., Ga.—City purchased an American-LaFrance aerial truck at $9,500.

Indianapolis, Marion Co., Ind.—Mack-International Motor Truck Co. awarded contract for 7 pieces of fire apparatus; to include one pumper, two hose and ladder trucks, two rescue cars and two combination hose cars, at $56,400. American-LaFrance Fire Engine Co. has contract for an aerial truck at $23,000.

When
In the Market
for equipment or supplies make your wants known through FIRE ENGINEERING. More bidders mean more competition and better satisfaction.

Frederick, Md.—City purchased an Ahrens-Fox aerial ladder truck for the fire department, at $16,500.

Southboro, Worcester Co., Mass.—At special meeting it was voted to appropriate $20,000 for the erection of a new fire station.

Whitman, Plymouth Co., Mass.—Selectmen investigating different types of fire apparatus before purchasing a new piece of apparatus for the local fire department.

Gloucester City, Camden Co., N. J.—Plans being drawn for a new fire house to be erected in the Third Ward, adjoining the city stable on Powell Street.

Columbus, Franklin Co., Ohio.—City will erect a new fire station in the vicinity of Torrence and Brevoort Roads.

Columbus, Franklin Co., Ohio—Mr. R. B. Criswell of the Ohio Inspection Bureau advises that the following cities and towns of Ohio are considering the purchase of fire apparatus: Athens, Belmont, Bowling Green, Brady Lake, Covington, Crestline, De Graff, Edison, Ft. Laramie, Granville, Holgate, Marysville, Minster, Mt. Sterling, Noffs, New Philadelphia, Perrysville, Richwood, Sebring, Waterville, and Westerville.

Hoosick Falls, Rensselaer Co., N. Y.—Plans being considered for the installation of a modern fire alarm signal system. J. J. Shea, Chief of Dept.

Saratoga Springs, Saratoga Co., N. Y.—Additional fire protection in the way of purchase of an aerial laddertruck, increased personnel of fire department, erection of new fireproof fire station, etc., has been recommended by the Fire Insurance Rating Board. C. H. Knapp, Mayor.

Manning, Carroll Co., Iowa—Fire department agitating for purchase of fire apparatus.

Passaic, N. J.—City to purchase 1,000-gal. Ahrens-Fox pumper. R. H. Bowker, Chief.

Marion, Ohio—Ordinance drafted for $15,930 bond issue. Will be used to purchase a 1,000-gal. pumper.

Portland, Multnomah Co., Ore.—Plans and specifications have been completed for three of the eight new fire stations to be erected. Bids will be invited soon for their construction.

Abbottstown, Adams Co., Pa.—Funds being raised for the purchase of a pumper. $1,000 already collected.

Los Angeles, Cal.—In June election, city will vote on $4,740,675 bond issue for fire department. Money to purchase real estate, erect buildings and purchase fire equipment. Chief Scott seeks purchase of 22,000 feet of hose, forty bungalow-type fire stations and a new fire boat.

Sherburne, Chenango Co., N. Y.—A proposition to purchase a piece of fire apparatus at $7,000 was defeated at a recent election.

Schenectady, N. Y.—Reports state that this city is in need of a new fire station and plans and specifications are being prepared.

Drexel Hill, Delaware Co., Pa.—Considering the construction of a $60,000 fire station nad gymnasium for the fire company here.

Logan, Philadelphia Co., Pa.—New fire station to be erected here in the near future.

New Inspection Plan in New Orleans

A new inspection form has been put into use by the New Orleans fire department under direction and supervision of Chief Engineer John M. Evans. The form is a distinct improvement over that in use here for several years and will result in a closer check on buildings where fire hazards are known to exist. This form is the compilation of Chief Evans after months of close study of the requirements throughout New Orleans and is declared by fire preventionists as being wholly adequate to meet the needs.

Chief Evans announces that officers and men in the service of the fire department will make inspections.

All business establishments and all buildings where fire hazards are known to exist will be subject to the most rigid inspection. This will also apply to school buildings and dwellings.

If Chief Evans' representatives find fire hazards, then the occupant or the owner, or both, if deemed necessary or advisable, will be notified to remove immediately the danger. The notice will cover a period of twenty-four hours. Upon expiration of that time, the fire department inspector will make a second inspection and if the remedy suggested or recommended is not carried into effect, then the case is referred to the city fire marshal's department for prompt action.

Under the new plan, Chief Evans will have a complete record of every inspection made and, like himself, the district assistant chiefs and station commanders as well as the general personnel of the department will be entirely familiar with conditions in practically every foot of the developed area of New Orleans. The inspection record will be placed in a permanent file at the central fire station where easy reference may be had. Last year Chief Evans and the men under his command made upward of 50,000 inspections. With the adoption of more modern form, simplified to a material extent, the number of inspections in the next twelve months, beginning April 1, will be far greater than the splendid record established last year.

Underwriters' Report on Netherlands Fire

(*Continued from page* 482)

The report recommends that the taxpayers of any city should not be required to maintain any fire department apparatus for combating fires higher than 20 stories, that if realtors erect structures higher than 20 stories they and not the municipality should be required to provide and be responsible for the fire fighting equipment above the 20th story.

Buildings of such heights, under construction, should be protected with the equipment equivalent to that required for permanent installation, the report declares, and this would mean not alone the standpipes to be installed as the building progresses but that the fire pumps must also be installed and a full enclosed elevator accessible for use by the firemen.

That there *"should be no divided responsibility* with the city authorities as to who has direct supervision over the erection and equipment of standpipes in high buildings while under construction," is one of the telling points made in the published document, which quotes Chief Kenlon as stating that a recent ruling of the city's Law Department placed the responsibility for the erection and equipment of standpipes in buildings during construction under the jurisdiction of the superintendent of buildings and that the superintendent of buildings has the authority to place a 'stop order' against any such building that violates the regulations.

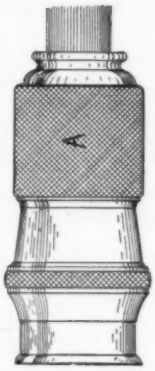
Such Buildings Should Have Smoke Proof Fire Towers

The report or survey concludes with the recommendation that hotels or other domiciles built high should have a smoke proof fire tower. The report points out that the New York City building code does not require such egress towers in multiple residence and hotel buildings of such heights while requiring such a tower in a commercial building. The report concludes—*"it is indefensible to suggest that a business building devoted to eight or ten hours of daylight occupancy must have additional safety provided by a smoke proof exit and access stairway."*

That the *"law seems especially weak and inconsistent"* in this respect, is cited in the report with reference to the fact that in forty story residence buildings, in use 24 hours and housing sleeping women and children *"such additional life safety exit way is not deemed essential in the uppermost stories thereof."*

The report does not disclose any "cause" of the fire and it estimates the loss at approximately $200,000. It also raises some question of the ability of fire hose to withstand the high pressures required for fighting fires in tall buildings.

Savannah, Ga., Receives New Pumper—A new pumper has been delivered to Savannah, Ga.



The Haley Improved Nozzle

Controls the diameter of the stream or shuts it off entirely by turning sleeve "A".

Saves Water Damage.

Hundreds in use from coast to coast.

No department can afford to be without it.

Write for details.

L. P. Brown Machine & Tool Co.,
Attleboro, Mass.

S&M Special Lighting Equipment For Fire Apparatus **S&M**

Search-Lites
Red Safety-Lites
Spot-Lites
Pick-up-Lites

Drum-Type
Head-Lites
Powerful
Handsome
Light projection—4000 ft.

Model No. 21

S & M Lites are nationally known on account of their high quality and their scientifically made reflectors.

The S & M Red Safety-Lite (originated by the S & M Lamp Co.) is rapidly coming into general use on Fire Apparatus. The intense flare of red light can be seen for several blocks and gives warning of approach of Fire Apparatus. Write for descriptive catalog.

S & M LAMP CO., (Inc.), 118 West 36th St., Los Angeles, Cal.

SOUTHWORTH

Quality Fire Apparatus

300 to 750 Gallon Triple Combination Pumpers, City Service Trucks, Combinations and Chemical Cars.

Connections solicited throughout the East

Southworth Machine Company

Fire Apparatus Division

Address all correspondence to the Chelsea Office.

Sales Office	*Telephone*	*Factory*
52 Sagamore Ave., Chelsea, Mass.	Chelsea 2105	Portland, Maine

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Solid Woven Cover Multiple Jacket Fire Hose

Quaker hose has a circular woven tight jacket of cotton, forming a cover of the highest quality. It offers great resistance to internal pressures and to dragging and rough handling

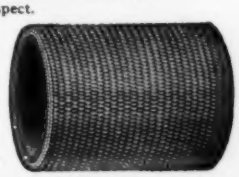
The tube is specially compounded, durable and elastic.

First grade fire hose in every respect.

QUAKER CITY RUBBER CO.

Manufacturers of Daniel's P. P. P. Red Packing

Wissinoming, Philadelphia



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Portable Electric Searchlights for Fire Departments

Two Switches

Two Filament Bulbs

Powerful

Aluminum Construction

Universal Joint Motion

Dependable

Send for catalog and prices of full line

Carpenter Mfg. Company
125 Broadway, Boston, Mass.

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of Every Description

QUALITY GUARANTEED

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Prompt Delivery

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Thorough Weather Protection
Erick Sirens do not clog up. Snow and ice cannot enter and stop sounding rotor. Completely protected and sheltered from outside influences.

Features That Prove Supremacy

Instant Alarm
Every telephone is a fire alarm station, permitting operator to sound alarm **instantly**, giving your fire department a chance to get the jump on the fire.

Universal Sound Projector
The Erick Sound Rotor and Deflector is built to instantly send a Fire Alarm.

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New Victor Gas and Fume Mask

Better Rubber. Longer Life. Better Fitted. Moulded to Fit the Face. Better Vision. Renewable Lenses. Better Air. Better Work. Low Prices. High Quality.

Over 5,000 Victor Gas Masks in Service

Full Line Fire Dept. Supplies and Equipment.

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156 Chambers St., New York

D. A. Woodhouse Pres. and Gen. Mgr. **George J. Kuss** Vice-Pres. and Treas.

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Fire Hydrants

Are given preference by so many fire protection and water works men because they know that more than half a century of experience go into their manufacture and they embody valuable and exclusive features.

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Waterford, N. Y.
James B. Clow & Sons, Chicago Agents

Eastman Improved Platforms and Holders

Write for Catalogue

are indispensable where high pressure service is required. With Eastman equipment any size streams can be easily handled by one man.

Eastman Nozzles and DeLuge Sets

are designed by engineers who for over thirty years have specialized in equipment for producing fire-fighting streams that are unsurpassed for solidarity, distance and effectiveness.

Samuel Eastman Co.,
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HALE PUMPS

LONGER effective life, higher efficiency and greater freedom from trouble may be had by using Hale Dreadnaught Fire Pumps.

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SIRACODE

Whatever your Siren requirements, you'll find Siracode away ahead of anything on the market today.

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SIRACODE SIGNAL CORP.
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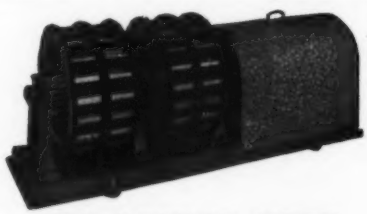
JOHN H. CLAY, INC.
1320 Ridge Ave., Philadelphia, Pa.
Established 1864

Clay Automatic Door Spring Devices for fire stations save valuable minutes in getting to fires. Write for details.



THE DENVER SIREN

Now used in 43 of the United States, Canada and abroad.
Motor driven on any electric circuit.

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Hendrie & Bolthoff Mfg. and Supply Co.
Denver — Colorado

The "Corey" Fire Hydrant of the improved Rensselaer type is the easiest to operate of any on the market.

Ask for prices and details

FILL IN AND MAIL TO
RENSSELAER VALVE CO., Troy, N. Y.
Send me Hydrant Book, No. 9.

Name .....
Street ..... City .....

A Word to Our Readers:

DO you ever stop to think that every advertiser in these pages offers either a product or a service that has certain unique advantages which he believes will interest and be of value to you? Otherwise it wouldn't be worth his while to advertise.

Almost every page contains the offer of some product or service that you would find of value in your department. It will pay you to read the advertising pages as carefully as you do the editorial.

"The wise man is he who is always willing to learn." It will pay you to read the advertising pages carefully. THE PUBLISHERS.

"Eastern Regulars" Limit Party to 100

(*Continued from page* 503)

Friday, August 12

Transfer from Hotel Multnomah to Union Station.

Leave Portland ..... 4:30 PM, No. Pac.
Arrive Seattle ..... 9:45 PM, No. Pac.
Leave Seattle ..... 11:45 PM, Gt. No.

Dinner in diner.

Saturday, August 13

Arrive Vancouver ..... 7:55 AM, Gt. No.
Leave Vancouver ..... 10:00 AM, CNRy.

Breakfast Hotel Vancouver. Auto ride. Luncheon and dinner in diner.

Arrive Kamloops ..... 8:40 PM, CNRy.
Leave Kamloops ..... 11:00 PM, CNRy.

Sunday, August 14

Short stop will be made to view Mt. Robson.

Arrive Jasper ..... 11:00 AM, P.T., CNRy.

Turn your watch ahead one hour to Mountain Time.

Breakfast in diner. Luncheon, dinner and lodging at Jasper Park Lodge. The afternoon at option of party. Jasper Park uses Mountain Time.

Monday, August 15

The day at Jasper Park. All meals and lodging at Jasper Park Lodge. Auto ride to Glacier of the Angel (Mount Edith Cavell).

Tuesday, August 16

The day at Jasper Park. All meals at Jasper Park Lodge. Auto ride to Maligne Canyon.

Leave Jasper ..... 8:30 PM, M.T., CNRy.

Wednesday, August 17

En route on the Canadian National Railways through the vast wheat growing sections of Saskatchewan. All meals in diner.

Turn your watch ahead one hour to Central Time

Thursday, August 18

Arrive Winnipeg ..... 8:30 AM, CNRy.

Breakfast in diner. Luncheon and dinner at Fort Gary Hotel. Auto ride.

Leave Winnipeg ..... 6:45 PM, CNRy.

Friday, August 19

Arrive Duluth ..... 9:30 AM, CNRy.

Breakast in diner. Luncheon and dinner at Hotel Duluth. Auto rid. Transfer to steamer dock.

Leave Duluth ..... 8:45 PM, GLTCorpn.

Staterooms assigned SS. OCTORARA.

Saturday, August 20

Arrive Houghton, Mich. ..... 9:30 AM, GLTCorpn.
Leave Houghton, Mich. ..... 10:30 AM, GLTCorpn.

On Lake Superior. All meals on steamer.

Sunday, August 21

Arrive Sault Ste. Marie ..... 4:00 AM, GLTCorpn
Leave Sault Ste. Marie ..... 6:00 AM, GLTCorpn.

Pass through the famous Soo Locks into Lake Huron.

Arrive Mackinac Island ..... 1:00 PM, GLTCorpn.
Leave Mackinac Island ..... 2:30 PM, GLTCorpn.

Carriage ride around Mackinac Island. All meals on steamer.

Monday, August 22

Turn your watch ahead one hour to Eastern Time

Arrive Detroit ..... 12:00 Noon GLT.
Leave Detroit ..... 1:00 PM, GLT.
Arrive Cleveland ..... 8:30 PM, GLT.
Leave Cleveland ..... 9:30 PM, GLT.

On Lakes Huron and St. Clair, Detroit River and Lake Erie. All meals on steamer.

Tuesday, August 23

Arrive Buffalo ..... 10:00 AM, GLTCorpn.

Transer to Lackawanna Station.

Leave Buffalo ..... 10:30 AM, DL&W
Arrive New York ..... 8:34 PM, DL&W

Breakfast on steamer. Luncheon and dinner in diner.

Riverhead, N. Y., Chief to Retire—Nathan T. Corwin, chief of the Riverhead, L. I., N. Y., fire department for ten years, has announced his intention to retire from the service in July.

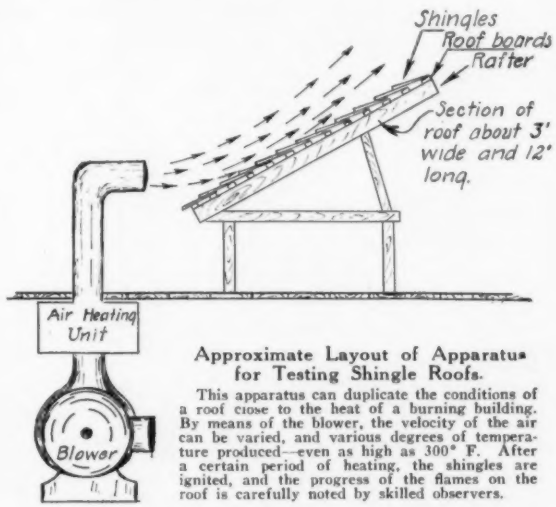
How Shingle Roofs Are Tested

Better home protection through fire-proof roofs is the purpose of special tests of roofing materials now being carried on by the Commerce Department's Bureau of Standards, according to Dr. George K. Burgess, Director.

Much loss of property and even life, according to Director Burgess, results from brands from burning buildings falling upon nearby structures.

Dr. Burgess hopes to help eliminate this danger through the construction of fire-proof roofs and in addition it is hoped that the study will develop facts of interest regarding the tendency of the burning roofing materials to produce flaming brands. In his opinion a good material combines a reasonable fire resistence with only a slight tendency to produce sparks after the material is ignited.

According to the Bureau of Standards the work has made necessary the designing of some interesting equipment, as shown in sketch herewith. In the spread tests of section of the roof about 3 feet wide by 12 feet long is built up in the usual way, and is mounted on a sloping frame work giving the test "deck," as it is called the position it would occupy on an ordinary house. The lower end of the deck is in front of an air duct which communicates with an electrically driven blower. Wind speeds of any desired velocity can be produced. Equipment is also provided for raising the temperature of the air as high as 300 degrees F. to stimulate the conditions existing near a burning



Approximate Layout of Apparatus for Testing Shingle Roofs.

This apparatus can duplicate the conditions of a roof close to the heat of a burning building. By means of the blower, the velocity of the air can be varied, and various degrees of temperature produced—even as high as 300° F. After a certain period of heating, the shingles are ignited, and the progress of the flames on the roof is carefully noted by skilled observers.

building or area in a conflagration. This heated air is blown over the deck for a certain length of time, after which the roofing material is ignited at the lower end. The progress of the fire up the sloping deck is then recorded and close watch is kept on the number, size, and condition of the brands produced.

Tenth Historic English Home in Ashes

The many owners in England of famous historic homes have become somewhat troubled concerning the buildings' safety following the destruction by fire of the tenth famous old home within a short period of time.

Woolmore Farm at Melksham, Wiltshire, which was once the home of Oliver Cromwell, was the last residence to be burnt to the ground. Outside of the home was an ancient tree known as the Cromwell tree, on which, according to history, seven men were hung in accordance with Cromwell's orders. The battle of Roundrow was fought nearby between the Parliamentary and Royal troops.

A favored theory as to the cause of this epidemic of fires is that the antique electric fittings are developing short circuits. Most of these old homes are remote from an adequate water supply and, once the fire has had a good start, the building is doomed.

An English butler of forty-five years' service, in writing to the London *Times*, made the statement that the servants neglect to safeguard the fire protection features of the homes in their charge. Many of the homes have fire extinguishers, which are permitted to get out of order or, if the contents are emptied, they are not refilled.

Not only have these fires caused large financial damage but five lives were lost when Oulton Hall, at Cheshire, was destroyed.

FALSE ALARMS

TIME WASTED

In one town, a youngster had wished for some time to become a fireman. He boasted to his friends of what he would do when he became chief of the fire department. Opportunity came to him when he was informed by a friend that there was a vacancy in the fire department some miles away. Eagerly the rookie availed himself of the chance to become a hoseman.

Two weeks later, his friends were surprised to see him back minus the fireman's uniform. Their curiosity was aroused, and they inquired as to his sudden return.

"I don't like being chief. I'm sorry I learned it."

WELL PROVIDED

Johnny's father was a fireman. He fought fires at times and at other times he engaged in the famous indoor sport of the fire station.

"Johnny," said the mother, "will you go down to the cellar and split some kindling?"

"Wait till Dad comes home. I heard him tell Mr. Smith that he bought ten dollars worth of chips."

TOOK IT FOR GRANTED

A fireman was assigned to theatre inspection duty, and after making sure that the exit doors were unlocked, he sat on a trunk in the back of the stage to enjoy part of the show.

One of the performers, evidently new in the profession, approached him.

"I don't suppose you object to my smoking here," he said to the fireman as he reached for his cigarette case.

"Yes sir, I do," replied the fireman quickly. "There is a law against smoking back stage."

"Then where do all the cigarette and cigar butts come from?" inquired the actor.

"From gentlemen who did not ask about the law," came the mild reply.

YES, WHY!

During the trip of the chiefs to Cuba that was made following the convention of the I. A. F. C. at New Orleans, one of the party was being shown about the city by a guide.

While passing a rather imposing looking building the guide said, "We are now passing one of the largest saloons in the city."

"But why pass it," replied the fire chief.

PAGE MR. PUMPER

At a recent election, a lady entered the voting booth and after a moment or so, she came out again.

"Could you tell me," she asked one of the men, "who is Mr. Pumper? My husband told me to be sure to vote for him but I don't see his name on the list."

"What is he running for?" asked one of the men.

"The fire department," she replied sweetly. "Here is my husband's wire. He says, 'Be Sure and Vote for Pumper for the Fire Department.'"

NOT WANTED

In a fair sized city, a fire broke out in the kitchen of one of the houses, and the small sized fire department was called upon for assistance. Scarcely was the call in when the family succeeded in extinguishing the blaze, and the daughter of the family went down to the main street to intercept the fire company and tell them that they were no longer needed. The firemen arrived almost as soon as she reached the corner, and learning that the fire was out, the company returned to quarters.

The young lady had hardly reached her house when another company of firemen arrived from the opposite direction, and she directed them also to return to quarters.

Later it developed that the first company came to extinguish the kitchen fire but that the second one came to put out a blaze in a house around the corner.

Oh yes, the house burned down.

SPOILED THE SPORT

In one of the northern cities, a committee of the towns folk urged the introduction of an ordinance to make it illegal for firemen to swear at a fire. What prompted this measure was that the swearing on the part of the firemen interfered with the pleasure of the spectators at a fire.

CLEAN IN AND OUT

The chief in a rural town had a home made fire apparatus of which he was very proud. He was showing his apparatus to the chief of a nearby village, and observing how polished every nickel part on the apparatus was kept, the visitor remarked, "You certainly do keep your fire truck nice and clean."

"Yes," replied the proud chief, "and the truck returns the compliment by keeping the company treasury the same way."

Rome wasn't built in one day but it was burnt down in one night.

Even an Empty Fire House May Be of Some Value to the Community

In the analysis of Williston Park, L. I., a fire station is of far greater value than a fire apparatus in fire prevention and fire fighting work. Perhaps, the ladies sewing circle plan to use the house for meetings and the community organization hope to hold gatherings there to instill a greater love for the welfare of the district. Suffice to say that when two propositions were presented to the voters, one to appropriate $10,000 for the construction of a fire station and $15,000 for the purchase of fire apparatus, the first plan carried but the apparatus purchase was defeated. "Art" Espey considers such a building a fine structure to house a keg of nails and a barrel of water which is used as a water supply base for the fire-fighters should a fire occur. In any event, the fire station adds to the number of buildings in the community.

DONTFEAR

Smoke and Fume Respirator

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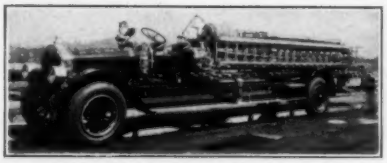

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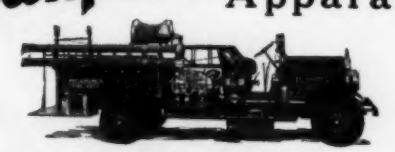

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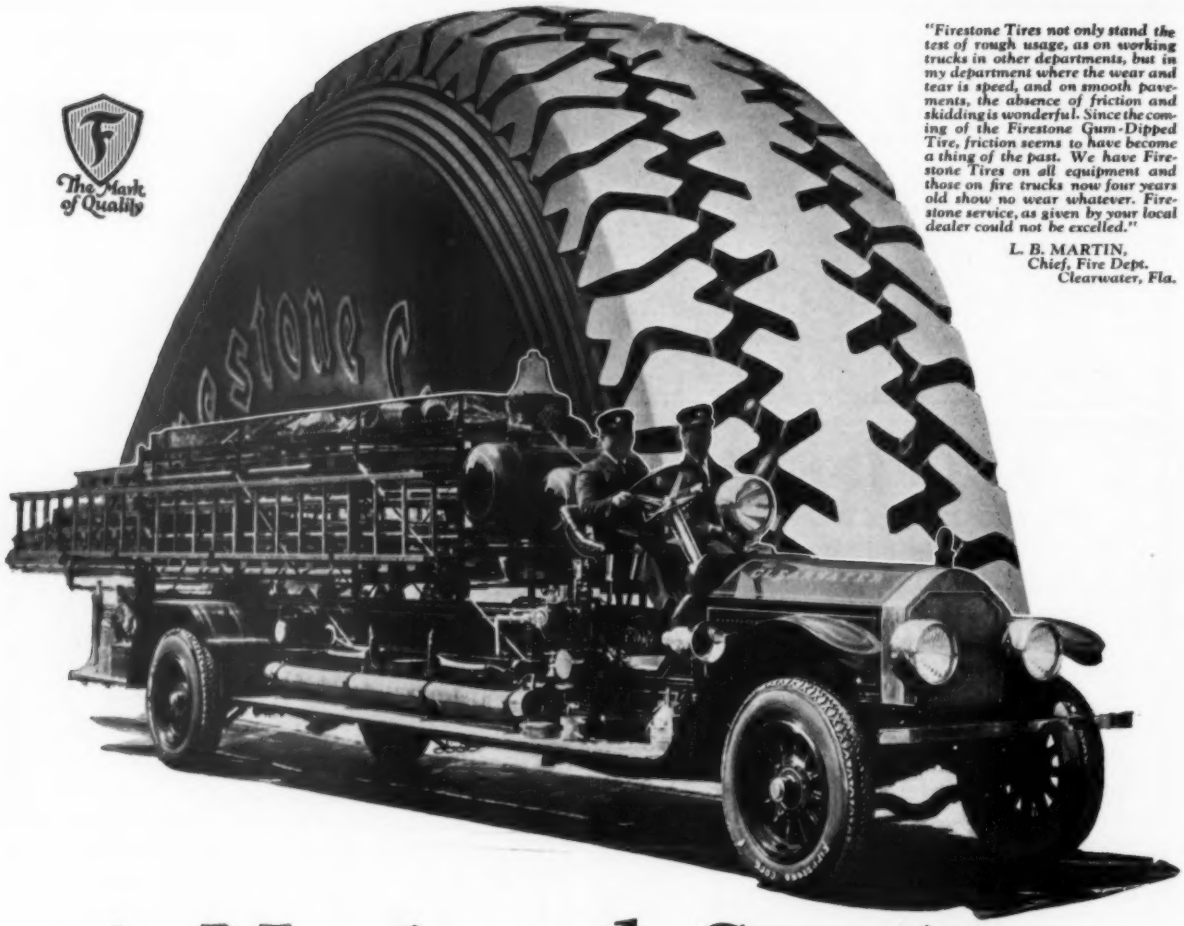

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12 Banners, Trumpets, etc.
13 Battery Jars.
14 Battery Zincs for Fire Alarm Batteries.
15 Bells, Fire Alarm, Municipal.
16 Body Equipments.
17 Boxes, Gongs, Reels, Registers, Fire Alarm.
18 Brakes, Air.
19 Brake Linings.
20 Brooms, Fire.
21 Building Materials, Fire Retardant.
22 Cable & Wire, Fire Alarm.
23 Caps, Firemen's.
24 Chains, Non-Skid, Fire Apparatus.
25 Chassis for Fire Apparatus.
26 Chemical Engines and Tanks.
27 City Service Trucks.
28 Coats & Suits, Firemen's Quick Hitch.
29 Combination Chemical & Hose Cars.
30 Cutting & Welding Equipment, Blow Torch.
31 Cutting & Welding Equipment, Electric.
32 Deluge Sets.
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35 Extinguishers, Fire, Tetrachloride.
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43 Fire Escapes, Portable.
44 Fire Escapes, Rigid.
45 First Aid Equipment.
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47 Flashlights, Hand.
48 Foam Liquid for Extinguishers.
49 Gas Masks and Respirators.
50 Gas & Smoke Helmets.
51 Gasoline & Oil Handling Equipment.
52 Goggles, Firemen's.
53 Helmets, Metal, etc.
54 Hose Carts, Reels & Racks.

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62 Hydrants, Fire.
63 Jacks for Fire Trucks.
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68 Nets, Life.
69 Nozzles, Pipes & Misc. Brass Goods.
70 Packings, Pump.
71 Pads, Pole Hole.
72 Paints, Fire Resisting.
73 Priming Ether, Motor.
74 Pumping Cars, Standard.
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76 Pumps, Fire Apparatus.
77 Pumps, Fire Service, Stationary.
78 Pumps, Portable, for Fire Protection.
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109 Whistles, Fire Apparatus.
110 Wrecking Trucks.

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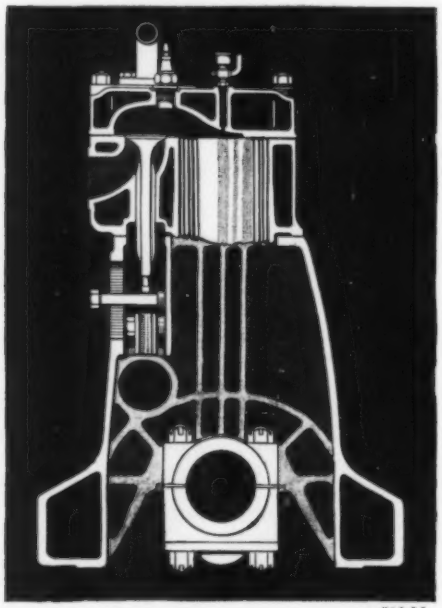

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D-735-L

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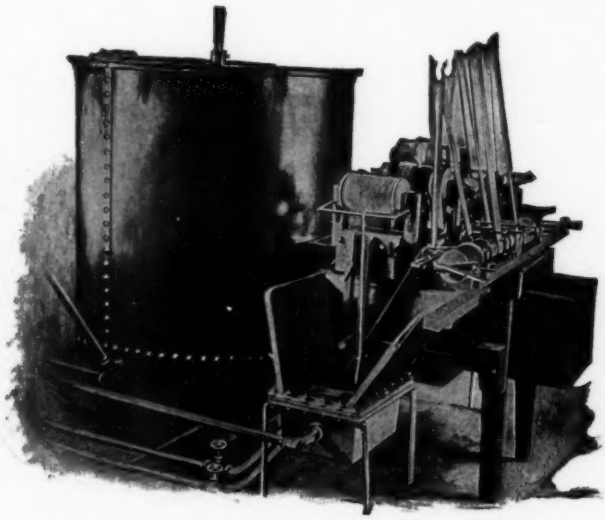

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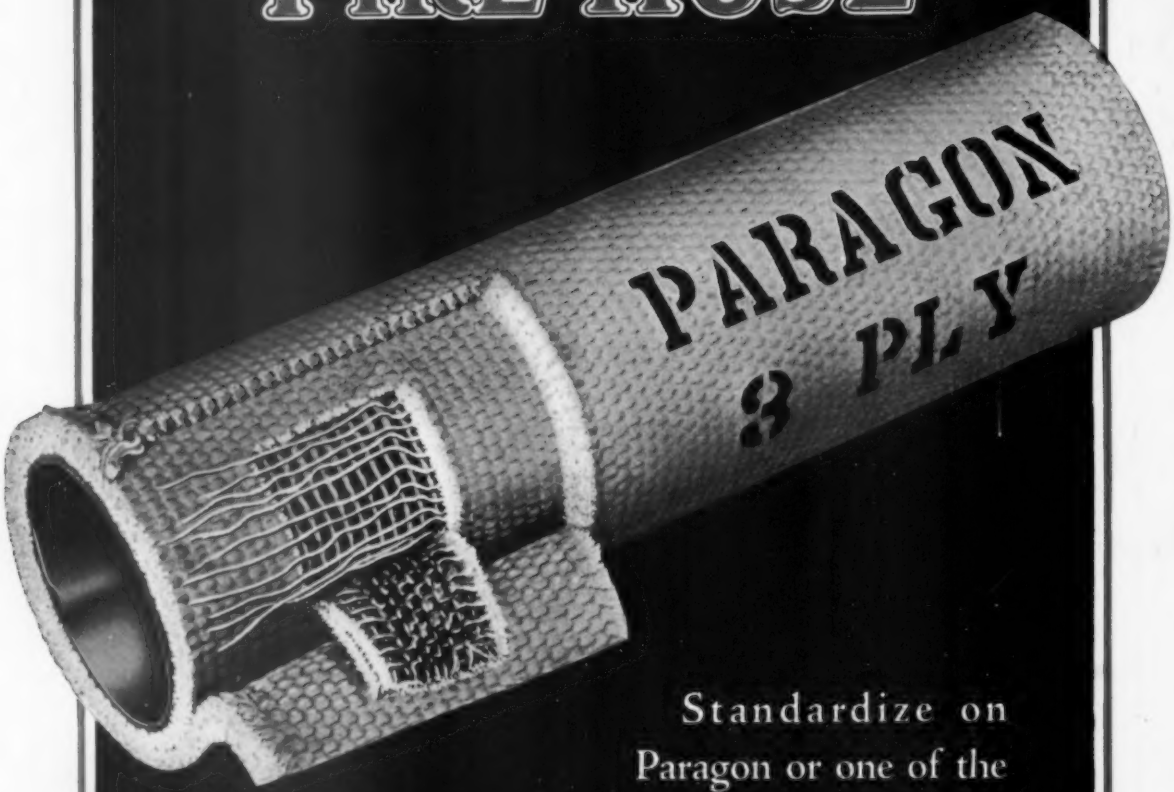

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